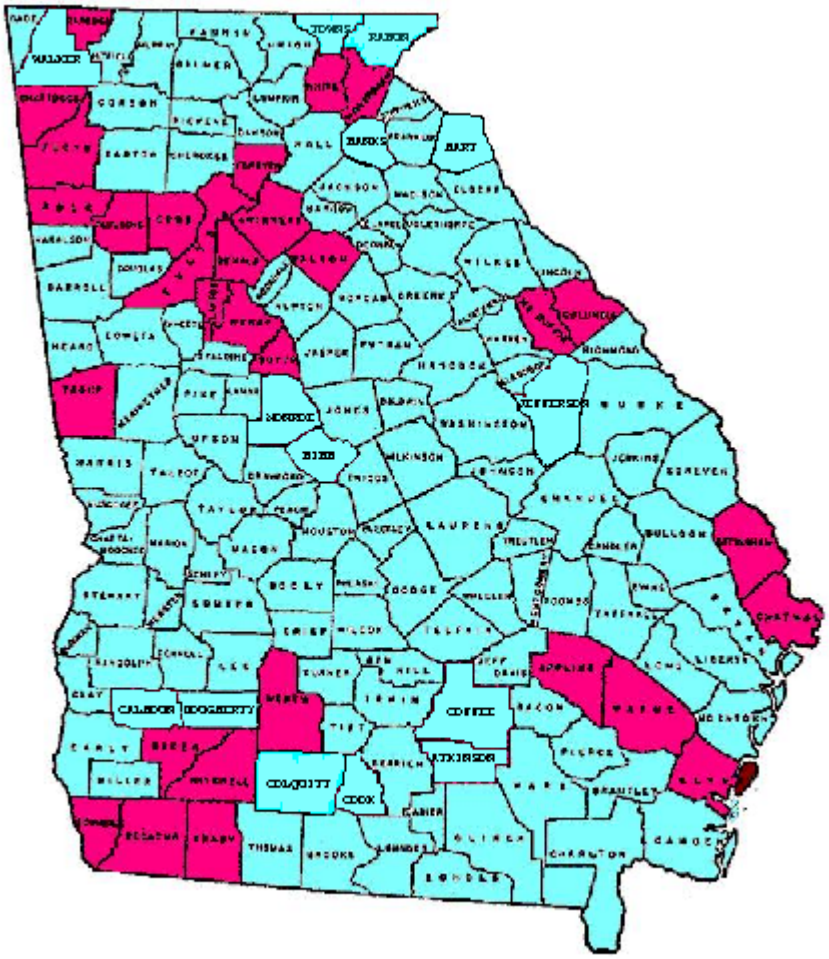
WinGAP Technical Workshop Manual



Revised January, 2009
WinGAP Version 3.8.3 [35]

WinGAP Technical Workshop

Table Of Contents

WinGAP Databases

WinGAP is a relational database system comprised of 95 databases or tables. There are 30 additional database files that are used as templates in creating reports such as prc's and PT-50R's. As WinGAP continues to change, additional databases will be added and some of the current ones will be modified. Below are listed the current files that are used in WinGAP.

NOTE: the legend for the Type column is as follows: **D** represents an active Database File, **S** represents a Schedule File, **T** represents a Template File, and **I** represents an Inactive file, or a file not currently used in WinGAP.

Database	Type	Description
_PRCACC	T	PRC file for accessories (used w/ Advantage)
_PRCCOM	T	PRC file for commercial improvements (used w/ Advantage)
_PRCFIRE	T	PRC file for fireplaces (used w/ Advantage)
_PRCLAND	T	PRC file for land subrecords (used w/ Advantage)
_PRCMH	T	PRC file for manufactured housing (used w/ Advantage)
_PRCREAL	T	PRC file for real property general information (used w/ Advantage)
_PRCRES	T	PRC file for residential improvements (used w/ Advantage)
_PRCSALE	T	PRC file for sales information (used w/ Advantage)
_PRCSKCH	T	PRC file for improvement area/perimeter/story height (used w/ Advantage)
ACC_CTRL	S	Accessory control schedule
ACC_IMPR	S	Accessory size adjustment
ACC_TBLS	S	Accessory table pricing
ACCDES	S	Accessibility/Desirability land factors
ACESSORY	D	Accessory Improvements, Commercial Extra Features, and Mobile Home Add-Ons
AIRCRAFT	D	Aircraft
APMDEPR	S	Appraisal Procedures Manual depreciation table
APPEALS	D	Appeals information
APPRSER	I	Appraiser list
ASMTRSN	D	Change of Assessment reasons assigned to parcels and personal property accounts
AUDIT	D	Audit information for personal property
AUDITPRP	T	Audit Department preparation file
AUDIT_INFO	D	Reasons for changes to audit status
AUDIT_DETL	D	Information concerning follow-ups, correspondence, and responses to audits
AVIONICS	D	Avionic equipment
BASECTRL	S	Base schedule control for real, mfg housing, and personal property
BOAT	D	Boat data
BOATMULT	I	Boat trending multipliers
CAREAPRM	S	Commercial improvement area/perimeter factors
COMMADDS	S	Commercial improvement structural element $/SF adjustments
COMMBASE	S	Commercial improvement base schedule
COMMIMP	D	Commercial improvement data
CONAMES	S	Listing of the county names and numbers
CONMAI	D	Conservation use history data
COST	D	Cost/Market data for personal property items
COSTDEPR	S	Cost depreciation factors used w/ audit appraisal method
COSTINDX	S	Cost trending factors used w/ audit appraisal method
CUVLAND	S	Conservation use schedule
CWALLHT	S	Commercial wall height adjustment factors
D_ACCSRX	T	Accessory digest prep file
D_COMIMX	T	Commercial improvement digest prep file

WinGAP Databases

Database	Type	Description
D_CONMAX	T	Conservation use digest prep file
D_INVNX	T	Inventory digest prep file
D_LSUBSX	T	Land subrecord digest prep file
D_OWNERX	T	Owner digest prep file
D_PERSX	T	Personal property general information digest prep file
D_REALX	T	Real property general information digest prep file
D_REASOX	T	Change of assessment reason digest prep file
D_REPROX	T	Residential improvement digest prep file
D_SALESX	T	Sales information digest prep file
DEFAULTS	S	Default data for county
DEPR	S	Depreciation factors for residential improvements/commercial improvements/manufactured housing/accessories
DEPTHTBL	S	Depth factors for urban land front foot pricing
DISCOVR	S	Discovery sources
DNR	D	Department of Natural Resources boat information
EDITLOG	D	Edit/Add/Delete activity log
FIREPL	D	Fireplace data for residential improvements
HOMESTD	S	Homestead exemption codes/amounts per tax districts
IMPLABEL	S	Improvement labels w/ valuation factors and amounts
INC_DETAIL	D	Income valuation information for a parcel
INC_MODEL	S	Schedule of income models
INDTYPE	I	Industrial types corresponding to NAICS
INDXLIST	S	Indexing information for files used in WinGAP
INVN	D	Inventory data for personal property accounts
IO	S	ABOS Inboard/Outboard boat valuation schedule
IRSCLASS	S	IRS classifications w/ APM group and life expectancies
LABLTYPE	S	Improvement label types w/ line styles & colors
LANDSUBS	D	Land subrecord information
LESSOR	D	Lessor data for personal property accounts
MAPCHG	I	Map & parcel change information
MOBILE	D	Manufactured housing information
MOBMFGTA	S	Manufactured housing table w/ manufacturer and model
MSIZADJ	S	Manufactured housing size adjustment table
NADA_DEP	S	NADA depreciation schedule
NADA_MFG	S	NADA manufacturer listing
NADA_MODEL	S	NADA model listing
NADA_MODIFIERS	S	NADA age and condition modifiers
NADA_OLDHOME	S	NADA depreciation chart for older homes
NADA_SVS	S	NADA Special Valuation Section used for obtaining chart number for older homes or homes not in mfg list
NADA_SVS_CATEGORY	S	NADA Special Valuation Section category listing
NADA_TIPOUT	S	NADA schedule for tipouts
NADA_WHITE	S	NADA White Section containing chart numbers for various widths/age combinations
NADA_YELLOW	S	NADA Yellow Section containing the a value for a width/length/Yellow Chart # combination
NAICS	S	NAICS codes
NEIGHBOR	S	Neighborhood adjustment factors

WinGAP Databases

Database	Type	Description
NEWOWNER	D	New owner data
NOTICES	D	Notice data for printed change of assessments
OB	S	ABOS valuation schedule for boats with outboard motor
OM	S	ABOS valuation schedule for outboard motors
OTHER	D	Other stratified items for personal property accounts
OWNER	D	Owner information for all property types
PERMITS	D	Permit data for buildings
PERMTYPE	S	Permit types
PERSONAL	D	Personal property general information
PH	S	ABOS valuation schedule for house boats, pontoons, deck boats, etc
PKEYS	S	Primary keys for all tables
PPDEPR	I	Personal property depreciation tables
PRCACC	T	PRC file for accessories
PRCCOM	T	PRC file for commercial improvements
PRCFIRE	T	PRC file for fireplaces
PRCLAND	T	PRC file for land subrecords
PRCMH	T	PRC file for manufactured housing
PRCPERS	T	PRC file for personal property general information
PRCREAL	T	PRC file for real property general information
PRCRES	T	PRC file for residential improvement information
PRCSALE	T	PRC file for sales information
PRCSKCH	T	PRC file for improvement area/perimeter/story height
PT283	D	Timber sales information
PT50R	D	Real property return file
PTVALUES	S	Schedule for the valuation of timber
PW	S	ABOS valuation schedule for personal watercraft (jet skis)
RANK	S	Rank adjustment factors for commercial extra features
RATIO	D	Ratio data for sales analysis
REALPROP	D	Real property general information
REASON	S	Reason codes & descriptions for change of assessments, sales, overrides, and audit tracking
REPROP	D	Residential improvements
RURLAND	S	Rural land base pricing schedule
SALEINFO	D	Sales information
SB	S	ABOS valuation schedule for sailboats
SPLITS	I	Splits data
SRATEMP	T	Sales ratio temporary use file
STREET	I	Street directory
SUBDIVIS	S	Urban land pricing schedules
SUBDIVISIONS	S	Subdivision list
TAXDIST	S	Tax districts
USERS	S	User list w/ logins and passwords
VIEWLOG	D	Records indicating when an owner, parcel, mfg home or personal property account was viewed.
WGSKETCH	D	Sketch information for residential/commercial improvements
ZIP	S	Zip code directory

WinGAP File Structures

Acessory				
Field Name	**Type**	**Length**	**Dec**	**Alias**
ACCKEY	N	10	0	Accessory Key
REALKEY	N	10	0	Real Property Acct Number
MOBILEKEY	N	10	0	Mobile Key
COMMKEY	N	10	0	Commercial Improvement Key
ACC_TYPE	C	1	0	Accessory Type (A = Accessory Improvement, C= Commercial Extra Feature, M = Mobile Home Add-on)
COMP_NO	C	4	0	Component Number
RANK	C	1	0	Quality Code
DIM1	N	4	0	Dimension 1
DIM2	N	4	0	Dimension 2
COMP_UNIT	N	7	0	Units
GRADE	N	4	2	Grade
PHY_DEP	N	4	2	Phy Depreciation Calculated
FUNC_OBSL	N	4	2	Functional Obsolescence
OTHER_FACT	N	4	2	Other Adjustment
IMP_VAL	N	9	0	Improvement Value Calculated
YEAR_BUILT	C	4	0	Year Built
DIGCLASS	C	1	0	Digest Class
DIGSTRAT	C	1	0	Digest Strat
OVR_VAL	N	10	0	Override Value
PHY_OVR	N	4	2	Phy Depreciation Override
COMMENTS	M	10	0	Comments
IDUNITS	N	10	0	Number of Identical Units
APPRNAME	C	30	0	Accessory Appraiser
CALC_VALUE	N	10	0	Last Calculated Value
PCOM	N	4	2	Percent Complete
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout
SKETCH	L	1	0	Flag indicating the existence of a sketch (.T. – True)
PHOTO	L	1	0	Flag indicating an attached photo. (.T. - True)
STATEHSFLG	L	1	0	Flag indicating the improvement is eligible for the State 65 & Over homestead exemption. (.T. – Yes, .F. - No)

WinGAP File Structures

Aircraft				
Field Name	**Type**	**Length**	**Dec**	**Alias**
AIRKEY	N	10	0	Air Key
PERSKEY	N	10	0	Personal Property Account Number
CITY	C	25	0	City
COUNTY	C	25	0	County
STATE	C	2	0	State
MAKE	C	25	0	Make
MODEL	C	25	0	Model
YEARBUILT	C	4	0	Year Built
NEW_USED	C	1	0	New or Used
SERIAL_NUM	C	20	0	Serial Number
REG	C	20	0	FAA Registration Number
DATEPURCH	D	8	0	Date Purchased
COST	N	9	0	Cost
TBO	C	10	0	Time Between Overhaul
TIME_LAST	C	10	0	Time of Last Overhaul
MAJORTOP	C	1	0	Overhaul Type
LAST_OVER	D	8	0	Overhaul Date
TIME_SINCE	C	10	0	Time Since Last Overhaul
VALUE	N	9	0	Value
BOOK	C	15	0	Pricing Guide
PAGE	C	5	0	Pricing Guide Page
BOOKVAL	N	11	0	Book Value
COMMENTS	M	10	0	Comments
VALMETHOD	C	1	0	Valuation Method
MARKETVAL	N	9	0	Market Value
INCOMEVAL	N	9	0	Income Value
SMOH	N	4	0	Since last Major Overhaul
DPH	N	7	2	Dollars per Hour for SMOH
APPRNAME	C	30	0	Aircraft Appraiser
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout

WinGAP File Structures

Appeals				
Field Name	**Type**	**Length**	**Dec**	**Alias**
APPEALKEY	N	10	0	Appeal Key
REALKEY	N	10	0	Real Property Account Number
PERSKEY	N	10	0	Personal Property Account Number
MOBILEKEY	N	10	0	Mobile Key
APPEAL_NO	C	7	0	Appeal Number
APPEALTYPE	C	1	0	Appeal Type
APP_DATE	D	8	0	Appeal Date
APPEAL_YR	C	4	0	Appeal Year
LASTNAME	C	40	0	Last Name
FIRSTNAME	C	20	0	First Name
MIDDLE	C	1	0	Middle Initial
AGENT	C	25	0	Agent
ADDRESS1	C	40	0	Address Line 1
ADDRESS2	C	40	0	Address Line 2
ADDRESS3	C	40	0	Address Line 3
CITY	C	20	0	City
STATE	C	2	0	State
ZIP	C	10	0	Zip
LEGAL_DESC	C	45	0	Legal Description
RETURNMADE	L	1	0	Return Made Flag
CURR_VAL	N	10	0	Current Value
RETURN_VAL	N	10	0	Returned Value
VID	N	10	0	Value in Dispute
MAIL_DATE	D	8	0	Mail Date for Notice
APLSTAT	C	1	0	Appeal Status
COMMENTS	M	10	0	Comments
APPRAISER	C	2	0	Appraiser Code
APLCLASS	C	1	0	Appeal Class
TOTALACRES	N	8	2	Total Acres
HOMEPHONE	C	14	0	Home Phone
WORKPHONE	C	14	0	Work Phone
DECALYR	C	4	0	Decal Year for Mfg Housing
DECALNUM	C	6	0	Decal Number for Mfg Housing
YEARBUILT	C	4	0	Year Built for Mfg Housing
WIDTH	N	2	0	Width for Mfg Housing
LENGTH	N	2	0	Length for Mfg Housing
MFG	C	30	0	Manufacturer for Mfg Housing
MODEL	C	30	0	Model for Mfg Housing
ANDATE	D	8	0	Assessment Notice Date
MAIL21	D	8	0	21-Day Notice Date

Appeals (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
M21PRNT	L	1	0	21-Day Notice Printing Date
BOEDATE	D	8	0	Date Appeal fwd to BOE
SUPDATE	D	8	0	Date Appeal fwd to Superior Court
MVDECALYR	C	4	0	Motor Vehicle Decal Year
TAGNO	C	8	0	Motor Vehicle Tag Number
MVDECAL	C	15	0	Motor Vehicle Decal Number
VIN	C	20	0	Motor Vehicle Identification Number
MILEAGE	N	6	0	Mileage
VEHCOND	C	9	0	Motor Vehicle Condition
BOA_VAL	N	10	0	Value assigned by Board of Assessors after appeal
ARB_VAL	N	10	0	Value assigned by Arbitrator after appeal
D21_VAL	N	10	0	Value on the 21-day Notice
SC_VAL	N	10	0	Value assigned by Superior Court after appeal
RESOLV_VAL	N	10	0	Value assigned if appeal is resolved
ARBDATE	D	8	0	Date of Arbitration
PARCEL_NO	C	20	0	Parcel number of property under appeal
APPRNAME	C	30	0	Appeal appraiser
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout

Audit				
Field Name	**Type**	**Length**	**Dec**	**Alias**
AUDITKEY	N	10	0	Audit Key
PERSKEY	N	10	0	Personal Property Account Number
AUDITTYPE	C	1	0	Audit Type
NO_YEARS	C	3	0	Audit Years
AUDFLAG	L	1	0	Audit Flag
LASTNAME	C	40	0	Last name or corporate name of owner at time of audit
FIRSTNAME	C	40	0	Owner’s first name
MIDDLE	C	40	0	Owner’s middle initial
ADDRESS1	C	40	0	Owner’s address line 1
ADDRESS2	C	40	0	Owner’s address line 2
ADDRESS3	C	40	0	Owner’s address line 3
CITY	C	20	0	Owner’s city
STATE	C	20	0	Owner’s state
ZIP	C	10	0	Owner’s zip code
WORKPHONE	C	14	0	Owner’s work phone
FAXNUMBER	C	14	0	Owner’s fax number
FEI	C	15	0	Owner’s FEI number

Audit (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
SST	C	15	0	Owner's State Sales Tax number
CONTACT	C	30	0	Contact name
NAICS	C	6	0	NAICS code
LAST_AUDIT	D	8	0	Last Audit Date
NEXT_AUDIT	D	8	0	Next Audit Date
AUDITOR	C	30	0	Individual leading audit process
PERFORM_BY	C	30	0	Individual performing account audit
COMMENTS	M	10	0	Comments
YR1RETINV	N	10	0	Year 1 returned inventory value
YR1AUDTINV	N	10	0	Year 1 audit inventory value
YR2RETINV	N	10	0	Year 2 returned inventory value
YR2AUDTINV	N	10	0	Year 2 audit inventory value
YR3RETINV	N	10	0	Year 3 returned inventory value
YR3AUDTINV	N	10	0	Year 3 audit inventory value
YR1RETFF	N	10	0	Year 1 returned furniture, fixtures, machinery & equipment value
YR1AUDFF	N	10	0	Year 1 audit furniture, fixtures, machinery & equipment value
YR2RETFF	N	10	0	Year 2 returned furniture, fixtures, machinery & equipment value
YR2AUDFF	N	10	0	Year 2 audit furniture, fixtures, machinery & equipment value
YR3RETFF	N	10	0	Year 3 returned furniture, fixtures, machinery & equipment value
YR3AUDFF	N	10	0	Year 3 audit furniture, fixtures, machinery & equipment value
RECORDSLOC	M	10	0	Location of audit records
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout

Avionics				
Field Name	**Type**	**Length**	**Dec**	**Alias**
AVKEY	N	10	0	Avionics Key
AIRKEY	N	10	0	Air Key
YEARBUILT	C	4	0	Year Model
COST	N	9	0	Cost
DESC	C	30	0	Description
PURDATE	D	8	0	Purchase Date
VALUE	N	9	0	Value
COMMENTS	M	10	0	Comments
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout

WinGAP File Structures

Boat				
Field Name	**Type**	**Length**	**Dec**	**Alias**
PERSKEY	N	10	0	Personal Property Account Number
BOATKEY	N	10	0	Boat Key
TAX_YEAR	C	4	0	Tax Year
MFG_NAME	C	25	0	Boat Manufacturer
MODEL_NAME	C	25	0	Boat Model
GA_REG	C	6	0	Ga Registration Number
YEAR_BUILT	C	4	0	Boat Year Model
FEET	N	3	0	Boat Feet
INCH	N	2	0	Boat Inches
HULL_MATER	C	15	0	Hull Material
HULL_NO	C	25	0	Hull Number (HIN)
DATE_PURCH	D	8	0	Date Purchased for Boat
NEW_USED	C	1	0	Boat Purchased New or Used
BOAT_COST	N	8	0	Boat Cost
MOTOR_MFG	C	25	0	Motor Manufacturer
MOTOR_MODL	C	25	0	Motor Model
MOTOR_YEAR	C	4	0	Motor Year Model
HORSEPOWER	C	4	0	Horsepower
MOTOR_STRT	C	1	0	Motor Starting Mechanism
MOTOR_PUR	C	1	0	Motor Purchased New or Used
MOTOR_DATE	D	8	0	Motor Purchased Date
MOTOR_COST	N	8	0	Motor Cost
MOTOR_VAL	N	8	0	Motor Value
MOTOR_BOOK	C	10	0	Motor Pricing Guide
MOTOR_PAGE	C	5	0	Motor Pricing Guide Page
BOAT_TYPE	C	1	0	Boat Type
BOAT_VALUE	N	8	0	Boat Value
BOAT_BOOK	C	10	0	Boat Pricing Guide
BOAT_PAGE	C	5	0	Boat Pricing Guide Page
MOTORBKVAL	N	8	0	Motor Book Value
BOATBKVAL	N	8	0	Boat Book Value
BTCOMMENT	M	10	0	Comments
BTMTVALUE	N	8	0	Boat and Motor Combined Value
LOCATION	C	25	0	Location
AUTOVAL	L	1	0	Trend Boat/Motor Value (T/F)
BTBKYEAR	N	4	0	Boat Lookup Year for Trending
MTBKYEAR	N	4	0	Motor Lookup Year for Trending
BTAUTOVAL	N	8	0	Boat Trended Value
MTAUTOVAL	N	8	0	Motor Trended Value
ABOS_BOAT	N	10	0	ABOS Boat Value
ABOS_MOTOR	N	10	0	ABOS Motor Value

Boat (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
ABOS_BT	L	1	0	T/F Flag: if T, ABOS Boat Value passed to digest
ABOS_MT	L	1	0	T/F Flag: if T, ABOS Motor Value passed to digest
APPRNAME	C	30	0	Boat appraiser
ABOS_COND	C	1	0	Condition of boat assigned during ABOS appraisal
ABOS_ADJ	N	4	2	ABOS adjustment
BOAT_PRICE	C	1	0	ABOS boat pricing code
MTR_PRICE	C	1	0	ABOS motor pricing code
SALT	L	1	0	Salt water flag (T/F)
TRAILER	N	10	0	Boat trailer value
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout

Commimp				
Field Name	**Type**	**Length**	**Dec**	**Alias**
COMMKEY	N	10	0	Commercial Improvement Key
REALKEY	N	10	0	Real Property Account Number
IMPROV_NO	N	3	0	Improvement Number
SECTION_NO	N	2	0	Section Number
COMMENT1	M	10	0	Comments
COMIMPOVR	N	10	0	Value Override
OVR_RSN	C	2	0	Override Reason
DIGCLASS	C	1	0	Digest Class
DIGSTRAT	C	1	0	Digest Strat
USEDAS_COD	C	4	0	Used As Code
BILTAS_COD	C	4	0	Built As Code
WALL_HGHT	N	2	0	Wall Height
CONST_TYPE	N	1	0	Construction Type
LIFE_EXP	N	2	0	Life Expectancy
YR_BILT	C	4	0	Year Built
EFYR_BILT	C	4	0	Effective Year Built
GRADE	N	4	2	Grade
PHY_DEP	N	4	2	Physical Depreciation Calculated
PHY_DEPOVR	N	4	2	Physical Depreciation Override
ECON_OBSL	N	4	2	Economic Obsolescence
FUNC_OBSL	N	4	2	Functional Obsolescence
OTHER_FACT	N	4	2	Other Factor
PCT_COMP	N	4	2	Percent Complete
FOUND_1	C	2	0	Foundation 1 Type
FOUNDPCT1	N	3	0	Foundation 1 % Coverage
FOUNDQC1	C	1	0	Foundation 1 Quality
FOUND_2	C	2	0	Foundation 2 Type
FOUNDPCT2	N	3	0	Foundation 2 % Coverage
FOUNDQC2	C	1	0	Foundation 2 Quality
FOUND_3	C	2	0	Foundation 3 Type
FOUNDPCT3	N	3	0	Foundation 3 % Coverage
FOUNDQC3	C	1	0	Foundation 3 Quality
WALLFR_1	C	2	0	Wall Frame 1 Type
WALLFRPCT1	N	3	0	Wall Frame 1 % Coverage
WALLFRQC1	C	1	0	Wall Frame 1 Quality
WALLFR_2	C	2	0	Wall Frame 2 Type
WALLFRPCT2	N	3	0	Wall Frame 2 % Coverage
WALLFRQC2	C	1	0	Wall Frame 2 Quality
WALLFR_3	C	2	0	Wall Frame 3 Type
WALLFRPCT3	N	3	0	Wall Frame 3 % Coverage

Commimp (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
WALLFRQC3	C	1	0	Wall Frame 3 Quality
EXWALL_1	C	2	0	Exterior Walls Type 1
EXWALLPCT1	N	3	0	Exterior Walls 1 % Coverage
EXWALLQC1	C	1	0	Exterior Walls 1 Quality
EXWALL_2	C	2	0	Exterior Walls 2 Type
EXWALLPCT2	N	3	0	Exterior Walls 2 % Coverage
EXWALLQC2	C	1	0	Exterior Walls 2 Quality
EXWALL_3	C	2	0	Exterior Walls 3 Type
EXWALLPCT3	N	3	0	Exterior Walls 3 % Coverage
EXWALLQC3	C	1	0	Exterior Walls 3 Quality
ROOFFR_1	C	2	0	Roof Frame 1 Type
ROOFFRPCT1	N	3	0	Roof Frame 1 % Coverage
ROOFFRQC1	C	1	0	Roof Frame 1 Quality
ROOFFR_2	C	2	0	Roof Frame 2 Type
ROOFFRPCT2	N	3	0	Roof Frame 2 % Coverage
ROOFFRQC2	C	1	0	Roof Frame 2 Quality
ROOFFR_3	C	2	0	Roof Frame 3 Type
ROOFFRPCT3	N	3	0	Roof Frame 3 % Coverage
ROOFFRQC3	C	1	0	Roof Frame 3 Quality
ROOFCV_1	C	2	0	Roof Cover 1 Type
ROOFCVPCT1	N	3	0	Roof Cover 1 % Coverage
ROOFCVQC1	C	1	0	Roof Cover 1 Quality
ROOFCV_2	C	2	0	Roof Cover 2 Type
ROOFCVPCT2	N	3	0	Roof Cover 2 % Coverage
ROOFCVQC2	C	1	0	Roof Cover 2 Quality
ROOFCV_3	C	2	0	Roof Cover 3 Type
ROOFCVPCT3	N	3	0	Roof Cover 3 % Coverage
ROOFCVQC3	C	1	0	Roof Cover 3 Quality
FLRCON_1	C	2	0	Floor Construction 1 Type
FLRCONPCT1	N	3	0	Floor Construction 1 % Coverage
FLRCONQC1	C	1	0	Floor Construction 1 Quality
FLRCON_2	C	2	0	Floor Construction 2 Type
FLRCONPCT2	N	3	0	Floor Construction 2 % Coverage
FLRCONQC2	C	1	0	Floor Construction 2 Quality
FLRCON_3	C	2	0	Floor Construction 3 Type
FLRCONPCT3	N	3	0	Floor Construction 3 % Coverage
FLRCONQC3	C	1	0	Floor Construction 3 Quality
FLRFIN_1	C	2	0	Floor Finish 1 Type
FLRFINPCT1	N	3	0	Floor Finish 1 % Coverage
FLRFINQC1	C	1	0	Floor Finish 1 Quality

Commimp (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
FLRFIN_2	C	2	0	Floor Finish 2 Type
FLRFINPCT2	N	3	0	Floor Finish 2 % Coverage
FLRFINQC2	C	1	0	Floor Finish 2 Quality
FLRFIN_3	C	2	0	Floor Finish 3 Type
FLRFINPCT3	N	3	0	Floor Finish 3 % Coverage
FLRFINQC3	C	1	0	Floor Finish 3 Quality
INTWAL_1	C	2	0	Interior Wall 1 Type
INTWALPCT1	N	3	0	Interior Wall 1 % Coverage
INTWALQC1	C	1	0	Interior Wall 1 Quality
INTWAL_2	C	2	0	Interior Wall Type 2
INTWALPCT2	N	3	0	Interior Wall 2 % Coverage
INTWALQC2	C	1	0	Interior Wall 2 Quality
INTWAL_3	C	2	0	Interior Wall 3 Type
INTWALPCT3	N	3	0	Interior Wall 3 % Coverage
INTWALQC3	C	1	0	Interior Wall 3 Quality
CLGFIN_1	C	2	0	Ceiling Finish 1 Type
CLGFINPCT1	N	3	0	Ceiling Finish 1 % Coverage
CLGFINQC1	C	1	0	Ceiling Finish 1 Quality
CLGFIN_2	C	2	0	Ceiling Finish 2 Type
CLGFINPCT2	N	3	0	Ceiling Finish 2 % Coverage
CLGFINQC2	C	1	0	Ceiling Finish Quality
CLGFIN_3	C	2	0	Ceiling Finish 3 Type
CLGFINPCT3	N	3	0	Ceiling Finish 3 % Coverage
CLGFINQC3	C	1	0	Ceiling Finish 3 Quality
WIRE_1	C	2	0	Wire 1 Type
WIREPCT1	N	3	0	Wire 1 % Coverage
WIREQC1	C	1	0	Wire 1 Quality
WIRE_2	C	2	0	Wire 2 Type
WIREPCT2	N	3	0	Wire 2 % Coverage
WIREQC2	C	1	0	Wire 2 Quality
WIRE_3	C	2	0	Wire 3 Type
WIREPCT3	N	3	0	Wire 3 % Coverage
WIREQC3	C	1	0	Wire 3 Quality
LIGHT_1	C	2	0	Lighting 1 Type
LIGHTPCT1	N	3	0	Lighting 1 % Coverage
LIGHTQC1	C	1	0	Lighting 1 Quality
LIGHT_2	C	2	0	Lighting 2 Type
LIGHTPCT2	N	3	0	Lighting 2 % Coverage
LIGHTQC2	C	1	0	Lighting 2 Quality
LIGHT_3	C	2	0	Lighting 3 Type

Commimp (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
LIGHTPCT3	N	3	0	Lighting 3 % Coverage
LIGHTQC3	C	1	0	Lighting 3 Quality
HEATAC_1	C	2	0	Heat/Ac 1 Type
HEATACPCT1	N	3	0	Heat/Ac 1 % Coverage
HEATACQC1	C	1	0	Heat/Ac 1 Quality
HEATAC_2	C	2	0	Heat/Ac 2 Type
HEATACPCT2	N	3	0	Heat/Ac 2 % Coverage
HEATACQC2	C	1	0	Heat/Ac 2 Quality
HEATAC_3	C	2	0	Heat/Ac 3 Type
HEATACPCT3	N	3	0	Heat/Ac 3 % Coverage
HEATACQC3	C	1	0	Heat/Ac 3 Quality
ONE_FIX	N	3	0	# of One Fixture Baths
TWO_FIX	N	3	0	# of Two Fixture Baths
THREE_FIX	N	3	0	# of Three Fixture Baths
BATH_KIT	N	3	0	# of Bath/Kitchen Combos
BATH_KIT15	N	3	0	# of 1.5 Bath/Kitchen Combos
BATH_KIT20	N	3	0	# of 2.0 Bath/Kitchen Combos
STRUC_VAL	N	10	0	Structure Value
EXFEAT_VAL	N	7	0	Extra Feature Value
BLDG_VAL	N	10	0	Total Section Value
IDUNITS	N	10	0	# of Identical Units
APPRNAME	C	30	0	Commercial improvement appraiser
OVRDATE	D	8	0	Date of override value
CALC_VALUE	N	10	0	Last calculated value
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout
COMM_WALL	N	6	0	Common wall length
BLDG_AREA	N	10	0	Total area of all building sections
SEC_AREA	N	10	0	Area of section
SKETCH	L	1	0	Flag indicating the existence of a sketch (.T. – True)
PHOTO	L	1	0	Flag indicating an attached photo. (.T. - True)
STATEHSFLG	L	1	0	Flag indicating the improvement is eligible for the State 65 & Over Homestead Exemption. (.T. - Yes, .F. - No)

WinGAP File Structures

Conmai				
Field Name	**Type**	**Length**	**Dec**	**Alias**
CONMAIKEY	N	10	0	Conservation Use Key
REALKEY	N	10	0	Real Property Account Number
PARENTPARC	C	20	0	Parent Parcel Identifier
ORIGCONVAL	N	10	0	Original Conservation Use Value
TCONACRES	N	8	2	Total Conservation Use Acres
DAT0	N	4	0	Original Conservation Use Year
DAT1	N	4	0	Second Year of Conservation Use
DAT2	N	4	0	Third Year of Conservation Use
DAT3	N	4	0	Fourth Year of Conservation Use
DAT4	N	4	0	Fifth Year of Conservation Use
DAT5	N	4	0	Six Year of Conservation Use
DAT6	N	4	0	Seventh Year of Conservation Use
DAT7	N	4	0	Eighth Year of Conservation Use
DAT8	N	4	0	Ninth Year of Conservation Use
DAT9	N	4	0	Tenth and Final Year of Conservation Use
VAL0	N	10	0	Original Conservation Use Value
VAL1	N	10	0	Conservation Use Value, Second Year
VAL2	N	10	0	Conservation Use Value, Third Year
VAL3	N	10	0	Conservation Use Value, Fourth Year
VAL4	N	10	0	Conservation Use Value, Fifth Year
VAL5	N	10	0	Conservation Use Value, Sixth Year
VAL6	N	10	0	Conservation Use Value, Seventh Year
VAL7	N	10	0	Conservation Use Value, Eighth Year
VAL8	N	10	0	Conservation Use Value, Ninth Year
VAL9	N	10	0	Conservation Use Value, Tenth Year
ORIGCONDAT	N	4	0	Beginning Conservation Use Date
BASECONDAT	N	4	0	Base Yr – Used in calculating change limitations
CURR_CUV	N	10	0	Adjusted Current Year's value for Conservation Use
UNADJ_CUV	N	10	0	Unadjusted Current Year's value for Conservation Use
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout
EX0	N	10	0	Exemption in first year
EX1	N	10	0	Exemption in second year
EX2	N	10	0	Exemption in third year
EX3	N	10	0	Exemption in fourth year
EX4	N	10	0	Exemption in fifth year
EX5	N	10	0	Exemption in sixth year
EX6	N	10	0	Exemption in seventh year
EX7	N	10	0	Exemption in eighth year
EX8	N	10	0	Exemption in ninth year
EX9	N	10	0	Exemption in tenth year

Conmai (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
CURR_EX	N	10	0	The Conservation Use 100% exemption in the current year

Cost				
Field Name	**Type**	**Length**	**Dec**	**Alias**
COSTKEY	N	10	0	Cost Key
PERSKEY	N	10	0	Personal Property Account Number
ITEM_DESC	C	30	0	Description of cost item
ITEM	C	2	0	Item code
ACQ_YEAR	N	4	0	Acquisition year of item
GROUP	N	1	0	Depreciation group
DISPOSALS	N	10	0	Total value of Item when sold
COST	N	10	0	Cost of item
DEPR	N	4	2	Depreciation factor assigned to item
FUNC_OBS	N	4	2	Functional obsolescence factor of item
MFG	C	15	0	Manufacturer of item
MODEL	C	15	0	Model of item
TYPE	C	15	0	Type of item
MODYEAR	C	4	0	Year item was manufactured
NEWUSED	C	1	0	Code for item, purchased new or used
SERIALNO	C	20	0	Serial number of item
EDITDATE	D	8	0	Last date item was added/edited
ECON_OBS	N	4	2	Economic Obsolescence factor of item
COMMENTS	M	10	0	Comments assigned to this item
REL	N	4	0	Remaining Economic Life
ASSET_CLAS	N	6	3	Asset class of item
BOOK_VAL	N	10	0	Book value of item
BOOK	C	15	0	Book the book value was obtained from
PAGE	C	5	0	Page in the book value was obtained from
VALMETHOD	C	1	0	Valuation method
COSTVAL	N	10	0	Cost value of item
MARKETVAL	N	10	0	Market value of item
INCOMEVAL	N	10	0	Income value of item
APMCOST	L	1	0	APM cost of item
OVRDEP	N	4	2	Override depreciation factor for item
APPRNAME	C	30	0	Cost appraiser
EDITTIME	C	12	0	Date/time of last edit
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout
EDITED	L	1	0	Flag indicating cost record has been edited

WinGAP File Structures

Dnr				
Field Name	**Type**	**Length**	**Dec**	**Alias**
DNRKEY	N	10	0	DNR Key
PERSKEY	N	10	0	Personal Property Account Number
BOATKEY	N	10	0	Boat key
GA_REG	C	6	0	Georgia registration number of boat
CERTNUM	C	7	0	Certificate number of boat
LNAME	C	20	0	Owners last name
FNAME	C	20	0	Owners first name
MIDDLEINIT	C	1	0	Owners middle initial
STREET	C	30	0	Street address where boat is located
CITY	C	15	0	City where boat is located
STATE	C	2	0	State where boat is located
ZIP	C	10	0	Zip code where boat is located
CNTY	C	3	0	County where boat is located
BIRTH	C	8	0	Owners birth date
OWNER	C	1	0	Code for owner
EXPIRE	C	8	0	Registration Expiration Date
PROCESS	C	8	0	Date of Processing
HULLID	C	20	0	Hull ID number of boat
MFG	C	20	0	Manufacturer of boat
LENGTH	C	5	0	Length of boat
YEAR	C	2	0	Year boat was manufactured
DNRCLASS	C	10	0	DNR class of boat
TOILET	C	1	0	Code for whether boat has toilet or not
HULL	C	1	0	Hull type of boat
PROPUL	C	1	0	Type of propulsion of boat
BTUSE	C	1	0	Boat Use
FUEL	C	1	0	Type of fuel used by boat
BOATTYPE	C	1	0	Type of boat
STATEPR	C	1	0	State Permit Code
STOLEN	C	1	0	Flag to denote if boat was stolen
CGDOCNO	C	10	0	Coast Guard Document #
TRANSTYPE	C	2	0	Transaction type
F1	C	1	0	Filler (not used)
DNRSTATUS	C	1	0	DNR Status Code
REASON	C	1	0	Inactive Reason Code
COMMENT	M	10	0	Comments assigned to boat
TAXDISTRIC	C	2	0	Tax District boat is located in
TAXCLS	C	1	0	Digest Classification
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout

WinGAP File Structures

Firepl				
Field Name	**Type**	**Length**	**Dec**	**Alias**
FIREKEY	N	8	0	Fireplace key
REPROPKEY	N	8	0	Improvement number
ITEM_NO	C	3	0	Type of fireplace
NUMBER	N	5	0	Number of fireplaces of this type
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout

Invn				
Field Name	**Type**	**Length**	**Dec**	**Alias**
PERSKEY	N	10	0	Personal Property Account Number
INVNKEY	N	10	0	Inventory key
MERCHANDIS	N	9	0	100% value of merchandise
RAW_MATER	N	9	0	100% value of raw materials
PROCESS	N	9	0	100% value of goods in process
FINISHED	N	9	0	100% value of finished goods
TRANSIT	N	9	0	100% value of goods in transit
WAREHOUSE	N	9	0	100% value of goods warehoused
CONSIGNED	N	9	0	100% value of goods consigned
FLOOR_PLAN	N	9	0	100% value of floor planned goods
SPARE_PART	N	9	0	100% value of spare parts
PACKING	N	9	0	100% value of packaging materials
GROSS_RAW	N	9	0	100% value of raw materials eligible for Freeport
GROSS_MFG	N	9	0	100% value of mfg goods eligible for Freeport
GROSS_OUT	N	9	0	100% value of out-of-state goods eligible for Freeport
NET_RAW	N	9	0	Net value of raw materials eligible for Freeport
NET_MFG	N	9	0	Net value of mfg goods eligible for Freeport
NET_OUT	N	9	0	Net value of out-of-state goods eligible for Freeport
TOTAL_GRS	N	10	0	100% total of inventory eligible for Freeport
TOTAL_NET	N	10	0	100% total of net inventory eligible for Freeport
TOTAL_INVN	N	10	0	Total value of inventory
FREXMPTPCT	N	6	4	Freeport percentage
LIVESTOCK	N	10	0	Value of livestock
FSUPPLY	N	10	0	Value of farm supplies
FRPORTDATE	D	8	0	Date Freeport was applied for
APPRNAME	C	30	0	Inventory appraiser
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout
COMMENTS	M	10	0	Notes and comments concerning the inventory record

WinGAP File Structures

Landsubs				
Field Name	**Type**	**Length**	**Dec**	**Alias**
LANDKEY	N	10	0	Land subrecord key
REALKEY	N	10	0	Real Property Account Number
CONMAIKEY	N	10	0	Conservation use key
SUB_TYPE	C	3	0	Subrecord type
LTYPE	N	1	0	Land type
LCLASS	N	1	0	Land class
ACRES	N	8	2	Subrecord acres
PREF	L	1	0	Code for whether subrecord is preferential or not
SUBOVERIDE	N	7	0	Subrecord override value
URBVALUE	N	10	0	Urban land value
SUBRECINFL	N	4	2	Subrecord influence
TABLE1	N	1	0	Depth Table Code
LANDMETHOD	N	2	0	Method of valuation
SUBDIVCODE	N	4	0	Subdivision code
TOTALDEPTH	N	6	0	Total depth of subrecord
FROMFRONT	N	6	0	Depth from the front
FRONTFEET	N	6	0	Front footage
EFF_FRONT	N	6	0	Effective front footage
SQUAREFEET	N	7	0	Square feet of subrecord
LOTS	N	2	0	Number of identical lots
RURVALUE	N	10	0	Rural land value
SUBRECNO	N	3	0	Subrecord number
CALCACRES	N	8	2	Calculated acres based on the subrecord dimensions
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout
UNITVALUE	N	10	0	Unit value from valuation schedule
DESCRIP	C	30	0	Description associated with schedule item
STATEHSFLG	L	1	0	NOT USED

Lessor				
Field Name	**Type**	**Length**	**Dec**	**Alias**
LESKEY	N	10	0	Lessor key
PERSKEY	N	10	0	Personal Property Account Number
OWNKEY	N	10	0	Owner key
LASTNAME	C	40	0	Owners last name
FIRSTNAME	C	20	0	Owners first name
MIDDLE	C	1	0	Owners middle initial
DESCRIP	M	10	0	Description of leased property item
MFG	C	30	0	Manufacturer of leased property item

Lessor (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
MODEL	C	30	0	Model of leased property item
YEAR	C	4	0	Year item was manufactured
COMMENT	M	10	0	Comments about item
QUANTITY	N	4	0	Number of identical items
ASSETNUM	C	15	0	Asset number of item
SERIALNUM	C	20	0	Serial number of item
EDITDATE	C	10	0	Date item was added or last edited
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout

Mobile				
Field Name	**Type**	**Length**	**Dec**	**Alias**
MOBILEKEY	N	10	0	Mobile key
REPROPKEY	N	10	0	Residential Improvement number
OWNKEY	N	10	0	Owner key
PREBMAPID	C	20	0	Prebill map ID number
MOBTYPE	N	1	0	Mobile home type in WinGap. The number 1 designates a Mobile home calculated as a Residential Improvement 2 designates a Non-Prebilled Mobile home 3 designates a Prebilled Mobile Home
DECALYR	C	4	0	Decal year of mobile home
DECALNUM	C	6	0	Decal number of mobile home
YEARBUILT	C	4	0	Year built of mobile home
WIDTH	N	2	0	Width of mobile home
LENGTH	N	2	0	Length of mobile home
SWMW	C	2	0	Single wide or multi wide mobile home
MFG	C	30	0	Manufacturer of mobile home
MODEL	C	30	0	Model of mobile home
MOBCLASS	C	2	0	Quality Class of mobile home
COMMENT	M	10	0	Comments about mobile home
SERIALNUM	C	20	0	Serial number of mobile home
YEARPURCH	C	4	0	Year mobile home was purchased
PURPRICE	N	6	0	Purchase price of mobile home
EXTWALL	N	3	0	Exterior wall type
ROOFING	N	3	0	Roofing type
FOUNDATION	N	3	0	Foundation type
FULLBATHS	N	2	0	Number of full baths
HALFBATHS	N	2	0	Number of half baths
EXTRAFEAT	N	2	0	Number of extra fixtures
BEDROOMS	N	2	0	Number of bedrooms
HEATAIR	N	3	0	Type of heating/air conditioning
FIREPLACE	N	3	0	Type of fireplace

Mobile (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
REPLACOST	N	6	0	Replacement cost of mobile home
ACTLAGE	N	2	0	Actual age of mobile home
EFFYRBUILT	C	4	0	Effective year built
CONDITION	C	1	0	Observed condition
DEPREC	N	4	2	Calculated depreciation factor
OVRIDEDEP	N	4	2	Override depreciation factor
FUNCOBSOL	N	4	2	Functional obsolescence factor
ECONOBSOL	N	4	2	Economic obsolescence factor
TAXDIST	C	3	0	Tax district mobile home is located in
HOUSE_NO	N	5	0	Street number
EXTENSION	C	3	0	Street extension
STDIRECT	C	2	0	Street direction
STTYPE	C	4	0	Street type
STREET_NAM	C	20	0	Street name
PARKNAME	C	20	0	Mobile Home park the mobile home is in
LOTNUMBER	C	5	0	Lot number within the mobile home park
DEALER	L	1	0	Dealer Flag (T/F)
SUBRECNO	N	3	0	Subrecord ID (Not Used)
VALUE	N	10	0	Calculated value of the mobile home
OVRVALUE	N	10	0	Override value of the mobile home
ADDONVAL	N	10	0	Total add-on value for add-ons to the MH
TIP_WIDTH	N	2	0	Tip out width
TIP_LENGTH	N	2	0	Tip out length
TIP_ADJ	N	4	2	Tip out adjustment factor
STHT_CODE	N	2	0	Story height code for the mobile home
TIP	L	1	0	Whether or not the MH has tip out area
TIPAREA	N	6	0	Tip out area of the mobile home
ACCTSTATUS	L	1	0	Inactive field
GUIDE	L	1	0	Flag used to define if NADA value is used is used on digest (T = Yes; F = No)
GUIDEVALUE	N	10	0	NADA pricing guide market value
GUIDEKEY	N	10	0	NADA pricing guide page key
APPRNAME	C	30	0	Mobile home appraiser
EXEMPT	L	1	0	Whether or not mobile home is tax exempt (T/F)
CALC_VALUE	N	10	0	Non-truncated value of MH
NADA_COND	C	1	0	NADA condition code
QUAD	C	2	0	USPS post-direction (NE, SE, etc)
PREV_BOX	N	10	0	Previous mobile home value
PREV_ADDON	N	10	0	Previous add-ons value
NADA_SVS	L	1	0	Flag defining the use of the NADA Special Valuation Section (T = Yes; F = No)

Mobile (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
NADA_QUAL	C	3	0	NADA quality assignment
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout
REVIEWDATE	D	8	0	Date mobile home was last reviewed/edited
NADA_WIDTH	N	2	0	Valid width in NADA table
CREATEDATE	D	8	0	Date record was added
SKETCH	L	1	0	Flag indicating the existence of a sketch (.T. – True)
PHOTO	L	1	0	Flag indicating an attached photo. (.T. - True)
CALC_GUIDE	N	10	0	Non-truncated value from NADA schedules

Newowner				
Field Name	**Type**	**Length**	**Dec**	**Alias**
NEWKEY	N	10	0	Newowner key
REALKEY	N	10	0	Real Property Account Number
OWNKEY	N	10	0	Owner key
LASTNAME	C	40	0	Owners last name
FIRSTNAME	C	20	0	Owners first name
MIDDLE	C	1	0	Owners middle initial
ADDRESS1	C	40	0	Address line one
ADDRESS2	C	40	0	Address line two
ADDRESS3	C	40	0	Address line three
CITY	C	20	0	Owners city
STATE	C	2	0	Owners state
ZIP	C	10	0	Owners zip code
HOMEPHONE	C	14	0	Owners home phone
WORKPHONE	C	14	0	Owners work phone
FAXNUMBER	C	14	0	Owners fax number
FEI	C	15	0	Owners federal tax ID number
SSN	C	11	0	Owners social security number
SSN1	C	11	0	Spouses social security number
SST	C	15	0	Owners state sales tax number
TAXRETURN	C	1	0	Type of tax return
ACCTSTATUS	L	1	0	Active or Inactive
LEGAL_DESC	C	45	0	Legal description of property
DATENOW	D	8	0	Date record was added or last edited
HOMEEXEMPT	C	2	0	Homestead exemption code
HOMEDATE	D	8	0	Homestead exemption date
ASSESS_RSN	C	2	0	Assessment reason code
TRANSFER	L	1	0	Flag designating if the newowner record is a transfer to an existing owner (T = Yes; F = No)

Newowner (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
MULTIOWNER	M	10	0	Multiple Owners field
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout

Notices				
Field Name	**Type**	**Length**	**Dec**	**Alias**
OWNKEY	N	10	0	Owner key
REALKEY	N	10	0	Real Property Account Number
PERSKEY	N	10	0	Personal Property Account Number
MOBILEKEY	N	10	0	Mobile key
LASTNAME	C	40	0	Last name of person receiving notice
FIRSTNAME	C	20	0	First name of person receiving notice
MIDDLE	C	1	0	Middle initial of person receiving notice
ADDRESS1	C	40	0	Address line one
ADDRESS2	C	40	0	Address line two
ADDRESS3	C	40	0	Address line three
CITY	C	20	0	City
STATE	C	2	0	State
ZIP	C	10	0	Zip code
PARCEL_NO	C	20	0	Parcel number of property receiving notice
ASSESS_RSN	M	10	0	Assessment reason codes for property
REASON	M	10	0	Assessment reasons for property
CURR_VAL	N	10	0	Current value of property
PREV_VAL	N	10	0	Previous value of property
TOTALACRES	N	8	2	Total acres of property receiving notice
LEGAL_DESC	C	45	0	Legal description of property
HOMEEXEMPT	C	2	0	Homestead exemption code
TAXDISTRIC	C	2	0	Tax district of property
ANPRINT	D	8	0	Date appeal notice printed
ANDATE	D	8	0	Date appeal notice filed
PREVASSMNT	N	10	0	Previous assessed value
CURRASSMNT	N	10	0	Current assessed value
TAXYEAR	N	4	0	Tax year
VAL_CHG	L	1	0	Real property flag for notice
NOTICE	L	1	0	Personal property flag for notice
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout

WinGAP File Structures

Other				
Field Name	**Type**	**Length**	**Dec**	**Alias**
OTHERKEY	N	10	0	Other property key
PERSKEY	N	10	0	Personal Property Account Number
DESCRIP	C	20	0	Description of other property
YEAR	C	4	0	Year other property was purchased
MFG	C	15	0	Manufacturer of other property
MODEL	C	15	0	Model of other property
COST	N	10	0	Cost of other property
BOOK_VAL	N	10	0	Book value of other property
BOOK	C	15	0	Name of Book value derived from
PAGE	C	5	0	Page number in book value derived from
VALUE	N	10	0	Market value of property
COMMENTS	M	10	0	Comments about other property
APPRNAME	C	30	0	Other appraiser
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout

Owner				
Field Name	**Type**	**Length**	**Dec**	**Alias**
OWNKEY	N	10	0	Owner key
LASTNAME	C	40	0	Owners last name
FIRSTNAME	C	20	0	Owners first name
MIDDLE	C	1	0	Owners middle initial
ADDRESS1	C	40	0	Owners address line one
ADDRESS2	C	40	0	Owners address line two
ADDRESS3	C	40	0	Owners address line three
CITY	C	20	0	Owners city
STATE	C	2	0	Owners state
ZIP	C	10	0	Owners zip code
HOMEPHONE	C	14	0	Owners home phone
WORKPHONE	C	14	0	Owners work phone
FAXNUMBER	C	14	0	Owners fax number
FEI	C	15	0	Owners federal tax identification number
SSN	C	11	0	Owners social security number
SSN1	C	11	0	Spouses social security number
SST	C	15	0	Owners state sales tax number
TAXRETURN	C	1	0	Whether or not a tax return has been filed
ACCTSTATUS	L	1	0	Active or inactive
MULTIOWNER	M	10	0	Multiple owners field

Owner (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
BIRTHDATE1	D	8	0	Owners birthdate
BIRTHDATE2	D	8	0	Spouses birthdate
EXISTS	L	1	0	Flag used in the Check In/Check Out Process to see if the record existed prior to checkout
NO_RELEASE	L	1	0	Flag used to designate if the owner record comes under the Open Records Act and information should not be released
CREATEDATE	D	8	0	Date owner record was added

Permits				
Field Name	**Type**	**Length**	**Dec**	**Alias**
PERMKEY	N	10	0	Permit key
REALKEY	N	10	0	Real Property Account Number
PARCEL_NO	C	20	0	Parcel number of property
LEGAL_DESC	C	45	0	Legal description of property
JOBADDRESS	C	40	0	Permit location address
PERM_NUM	C	10	0	Permit number
PERM_TYPE	C	20	0	Permit type
PERM_AMNT	N	20	2	Permit fee
SQUARE_FT	N	5	0	Square footage covered by permit
FIREPLACES	N	2	0	Number of fireplaces of property
DATE_ISSUE	D	8	0	Date permit issued
ISSUED_BY	C	15	0	Individual issuing permit
DATE_INSP	D	8	0	Date of first inspection
DATE_SCHED	D	8	0	Date construction is scheduled to be Completed
DATE_COMPL	D	8	0	Date construction was completed
APPROVD_BY	C	15	0	Permit approved by
COMMENTS	M	10	0	Comments about permit
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout

Personal				
Field Name	**Type**	**Length**	**Dec**	**Alias**
PERSKEY	N	10	0	Personal Property Account Number
OWNKEY	N	10	0	Owner key
CO_ID_NUM	C	8	0	County identification number
PARCEL_NO	C	20	0	Parcel number of account
ACCTEDIT	D	8	0	Date account was added or last edited
VALUEEDIT	D	8	0	Last date value was changed
PROPCLASS	C	1	0	Digest class of account
STRATA	C	1	0	Digest strat of account
ST_NUM	N	5	0	Street number of account
ST_EXT	C	4	0	Street extension of account
ST_DIRECT	C	3	0	Street direction of account
ST_NAME	C	23	0	Street name of account
ST_TYPE	C	4	0	Street type of account
UNIT	C	4	0	Condo/Apartment Unit #
RECORDS	M	10	0	Comments
BUSI_ID	C	40	0	Doing business as description
TAXDISTRIC	C	2	0	Tax district
BUSPHONE	C	14	0	Business phone
HOMPHONE	C	14	0	Home phone
FAXNUM	C	14	0	Fax number
RETURNMADE	L	1	0	Whether or not a return has been made
RETURN_VAL	N	10	0	Return value
RETURNDATE	D	8	0	Date tax return filed
PREV_VAL	N	10	0	Previous value
LAST_VAL	N	10	0	Last value
CURR_VAL	N	10	0	Current value
MEFF_VAL	N	10	0	Machinery, equipment, furnishings, and fixtures value of account
INVN_VAL	N	10	0	Inventory value of account
BOAT_VAL	N	10	0	Boat value of account
PLANE_VAL	N	10	0	Aircraft value of account
OTHER_VAL	N	10	0	Other equipment value of account
FRPORT_VAL	N	10	0	Freeport value of account
PENALTYVAL	N	10	0	Penalty fee assessed against account
NAICS	C	6	0	NAICS code
BLDGSF	N	8	0	Square footage of building
SALESF	N	8	0	Sales square footage
NOTICE	L	1	0	Whether or not an assessment notice has been assigned to account
REASON	C	2	0	Assessment reason code
FIELDAUDIT	L	1	0	Whether or not a field audit is scheduled
DESKAUDIT	L	1	0	Whether or not a desk audit is scheduled

Personal (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
FIELDCHECK	L	1	0	Whether or not a field check is scheduled
LASTAUDIT	D	8	0	Date account was last audited
FREEPRTFLG	L	1	0	Whether or not the account has Freeport
ANDATE	D	8	0	Date assessment notice was printed
CHGAPPR	C	10	0	Field not used
ACCTAPPR	C	10	0	Appraiser/user that last modified the account
ACCTAUD	C	10	0	Field not used
ORGYEAR	C	4	0	Year account was established
BUSYEAR	C	4	0	Year Business was started
ACCTSTATUS	L	1	0	Active or inactive account
DSVSOURCE	N	4	0	Discovery source for account
PORETURN	L	1	0	Post Office Return Flag (T/F)
CONTACT	C	40	0	Contact name for account
EMAIL	C	60	0	Email address of account
SPDIST	L	1	0	Whether or not account is in a special District
APPRNAME	C	30	0	Appraiser name that will appear as primary contact on COA notice
ALTERNATE	C	30	0	Alternate appraiser for COA notice
AUDITOR	C	30	0	Auditor for account
EZY	C	4	0	Year account was assigned to an Enterprise Zone
EZ_EXEMPT	N	10	0	Enterprise Zone exemption
QUAD	C	2	0	USPS post-direction (NS, SE, etc)
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout
REVIEWDATE	D	8	0	Date of last review of account
WEB_ADD	C	50	0	Internet address for account
EST_VALUE	L	1	0	Flag to determine if an estimated value was used (T = Yes; F = No)
NO_PT50	L	1	0	Flag indicating whether a PT50 form should be printed for the account
CREATEDATE	D	8	0	Date personal record was added
PHOTO	L	1	0	Flag which indicates the assignment of a photo to the personal property account (T = Yes; F = No)
ZIP	C	9	0	Zip code of the account’s situs

WinGAP File Structures

Realprop				
Field Name	**Type**	**Length**	**Dec**	**Alias**
REALKEY	N	10	0	Real Property Account Number
OWNKEY	N	10	0	Owner key
HOUSE_NO	N	5	0	Street number of parcel
EXTENSION	C	3	0	Street extension of parcel
STDIRECT	C	2	0	Street direction of parcel
STTYPE	C	4	0	Street type of parcel
STREET_NAM	C	20	0	Street name of parcel
UNIT	C	4	0	Condo/Apartment #
LANDLOT	C	3	0	Land lot of parcel
LANDDIST	C	2	0	Land district of parcel
LANDGMD	C	4	0	Georgia militia district of parcel
ZONINGCODE	C	4	0	Zoning code of parcel
COMMENT1	M	10	0	Comments about parcel
RETURN_VAL	N	10	0	Return value of parcel
ASSESS_RSN	C	2	0	Assessment reason code for parcel
PARCEL_NO	C	20	0	Parcel number of parcel
LEGAL_DESC	C	45	0	Legal description of parcel
VAL_CHG	L	1	0	Whether or not the value has changed
PREV_VAL	N	10	0	Previous value of parcel
CURR_VAL	N	10	0	Current value of parcel
VALCHGDATE	D	8	0	Date of value change
LAND_TYPE	N	1	0	Land type
TAXDISTRIC	C	2	0	Tax district code
HOMEEXEMPT	C	5	0	Homestead exemption code
CUV_RENEW	L	1	0	Conservation Use renewal flag
ORIGHOMVAL	N	10	0	Original floating homestead value
CURRHOMVAL	N	10	0	Current floating homestead value
REVIEWDATE	D	8	0	Date parcel was last reviewed
DATENOW	D	8	0	Date parcel was last edited
APPRAISER	C	3	0	Chief appraiser for parcel
PCY	C	4	0	Preferential covenant year of parcel
CCY	C	4	0	Conservation use year of parcel
HCY	C	4	0	Historic covenant year of parcel
OVRIDEVAL	N	10	0	Override value of parcel
INFLUENCE1	N	4	2	Influence factor 1
INFLUENCE2	N	4	2	Influence factor 2
INFLUENCE3	N	4	2	Influence factor 3
INFLUENCE4	N	4	2	Influence factor 4
INFLUENCE5	N	4	2	Influence factor 5
INFLUENCE6	N	4	2	Influence factor 6

Realprop (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
INFLUENCE7	N	4	2	Influence factor 7
INFLTYPE1	C	3	0	Influence type 1
INFLTYPE2	C	3	0	Influence type 2
INFLTYPE3	C	3	0	Influence type 3
INFLTYPE4	C	3	0	Influence type 4
INFLTYPE5	C	3	0	Influence type 5
INFLTYPE6	C	3	0	Influence type 6
INFLTYPE7	C	3	0	Influence type 7
DIGCLASS	C	1	0	Digest class of parcel
DIGSTRAT	C	1	0	Digest strat of parcel
TOPOGRAPHY	C	3	0	Topography code
WATER	C	3	0	Water code
SEWER	C	3	0	Sewer code
GAS	C	3	0	Gas code
ELECTRICTY	C	3	0	Electricity code
ROADSTREET	C	3	0	Type of road code
ROADCLASS	C	3	0	Type of road class code
DISTDRAIN	C	3	0	Drainage type code
NBRSTATUS	C	3	0	Neighborhood type code
ZONING	C	3	0	Zoning type code
ACC	N	1	0	Accessibility code
DESIRE	C	1	0	Desirability code
A_VALUE	N	10	0	Non-preferential value
P_VALUE	N	10	0	Preferential value
WOODACRES	N	8	2	Total wooded acres of parcel
TOTALACRES	N	8	2	Total acres of parcel
VENDNO	C	8	0	Lendor code
HISTVAL	N	10	0	Historic value of property
FUSERID	C	3	0	Id of user parcel is checked out to
NEIGHBHOOD	C	5	0	Neighborhood code for property
NEWOWNRFLG	L	1	0	Whether or not there is a new owner
SPLITSFLG	L	1	0	Whether or not property has split
HOMEDATE	D	8	0	Date of Homestead Application
SPDIST	L	1	0	Whether or not property is in special dist
REALGROWTH	N	10	0	Real growth value
INFLGROWTH	N	10	0	Inflationary growth value
ACCTSTATUS	L	1	0	Active or inactive
HISTYR1	N	4	0	Year 2 years prior from Current Year
HISTVAL1	N	10	0	Value of property 2 years from Current Yr
HISTYR2	N	4	0	Year 3 years prior to Current Yr

Realprop (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
HISTVAL2	N	10	0	Value of property 3 years from Current Yr
HISTYR3	N	4	0	Year 4 years prior to Current Yr
HISTVAL3	N	10	0	Value of property 4 years from Current Yr
LAT	C	11	0	Latitude of parcel
LON	C	9	0	Longitude of parcel
APPRNAME	C	30	0	Parcel appraiser
ALTERNATE	C	30	0	Alternate parcel appraiser
LAND_APPR	C	30	0	Parcel land appraiser
OVRDATE	D	8	0	Override date
OVR_RSN	C	2	0	Override reason code
A_CALC	N	10	0	Last calculated non-preferential value
P_CALC	N	10	0	Last calculated preferential value
EZY	C	4	0	Year parcel was assigned to an Enterprise Zone
EZ_EXEMPT	N	10	0	Enterprise Zone exemption
QUAD	C	2	0	USPS post-direction (NE, SE, etc)
INCOME	L	1	0	Flag defining if the value generated from the Income approach will be used on the digest (T = Yes; F = No)
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout
SUBD_NAME	C	40	0	Name of subdivision parcel is in
SUBD_LOT	C	6	0	Lot of subdivision parcel is in
SUBD_BLK	C	4	0	Block of subdivision parcel is in
SUBD_SEC	C	4	0	Section of subdivision parcel is in
SUBD_PHSE	C	4	0	Phase of subdivision parcel is in
IO_NAME	C	3	0	Initials of user who checked parcel out
IO_DATE	D	8	0	Date parcel was checked out
OVR_ACRES	N	8	2	Override acres of parcel
LNDCOMMENT	M	10	0	Comment field for land
PARCEL_NO2	C	20	0	Previous parcel id
BOE_YEAR	N	4	0	Year BOE decision was made
BOE_VALUE	N	10	0	Value determined by BOE
CREATEDATE	D	8	0	Date parcel record was added
ZIP	N	9	0	Zip code of the parcel's situs
STATEHSVAL	N	10	0	Total value (100%) of all property components eligible for State 65 & Over homestead

WinGAP File Structures

Reprop				
Field Name	**Type**	**Length**	**Dec**	**Alias**
REPROPKEY	N	10	0	Residential Improvement number
REALKEY	N	10	0	Real Property Account Number
DIGCLASS	C	1	0	Digest class
DIGSTRAT	C	1	0	Digest strat
OCCUPANCY	N	1	0	Occupancy code
YR_BUILT	N	4	0	Year built
EFYR_BUILT	N	4	0	Effective year built
GRADE	N	4	2	Grade
OBSV_COND	N	1	0	Observed condition
NO_BEDRMS	N	2	0	Number of bedrooms
NO_ROOMS	N	2	0	Number of rooms
FOUNDATION	N	2	0	Foundation code
EXT_WALLS	N	2	0	Exterior walls code
ROOFING	N	2	0	Roofing code
ROOF_SHAPE	N	2	0	Roof shape code
FLOOR_CONS	N	2	0	Floor construction code
B_A_OPT	N	1	0	Basement/attic type
SQB_AREA	N	5	0	Basement square footage
SQB_FIN	N	4	2	Basement % finished
SQA_AREA	N	5	0	Attic square footage
SQA_FIN	N	4	2	Attic % finished
DB_DESC	N	2	0	Basement size, descriptive method
DB_FIN	N	2	0	Basement finish, descriptive method
BASEMTQUAL	N	1	0	Basement quality code
D_ATTIC	N	2	0	Attic size, descriptive method
ATTICQUAL	N	1	0	Attic quality code
FLOOR_FIN	N	2	0	Floor finish code
INT_WALL	N	2	0	Interior wall code
INT_CEIL	N	2	0	Interior ceiling code
HEAT	N	2	0	Heating/AC code
PL_STD	N	2	0	Number of standard complements
PL_XTRA	N	2	0	Number of extra fixtures
FULLBATHS	N	2	0	Number of full baths
HALFBATHS	N	2	0	Number of half baths

Reprop (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
STHT_CODE	N	2	0	Story height code
HEATEDAREA	N	6	0	Total heated area
PFUNC_DEP	N	4	2	Functional obsolescence factor
PEC_DEP	N	4	2	Economic obsolescence factor
PCOM	N	4	2	Percent complete factor
PHY_DEP	N	4	2	Calculated physical depreciation
PHY_OVR	N	4	2	Physical depreciation override
OVR_VAL	N	10	0	Override value
TIMP_VAL	N	10	0	Total improvement value
COMMENT	M	10	0	Comments about improvement
OVR_RSN	C	2	0	Override reason code
CDU	N	4	2	Cost and design factor
OVRDATE	D	8	0	Override date
ADJ_POINTS	N	13	2	Adjusted Points
APPRNAME	C	30	0	Residential Improvement appraiser
RCN	N	10	0	Replacement cost new
CALC_VALUE	N	10	0	Non-truncated value of improvement
EXISTS	L	1	0	Flag used in the Check In/Check Out Process to see if the record existed prior to checkout
SKETCH	L	1	0	Flag indicating the existence of a sketch (.T. – True)
PHOTO	L	1	0	Flag indicating an attached photo. (.T. - True)
STATEHSFLG	L	1	0	Flag indicating the eligibility of the improvement for the State 65 & Over homestead exemption (.T. - 'Yes'; .F. - 'No')

Saleinfo				
Field Name	**Type**	**Length**	**Dec**	**Alias**
SALEKEY	N	10	0	Sales key
REALKEY	N	10	0	Real Property Account Number
GRANTEE	C	40	0	Grantee
GRANTOR	C	40	0	Grantor
SALEDATE	D	8	0	Sale date
DEEDPAGE	C	10	0	Page in deed book
PLOTPAGE	C	10	0	Page in plat book
SALEPRICE	N	11	0	Sales price
SALECLASS	C	1	0	Digest class
STRAT	N	1	0	Digest strat
REASON	C	2	0	Sales reason
QUALIFIER	C	2	0	Sales qualifier
MKTVAL	N	10	0	Fair market value

Saleinfo (cont)				
Field Name	**Type**	**Length**	**Dec**	**Alias**
COMMENT	M	10	0	Comments about sale
PTD	C	1	0	Whether or not sale is selected by State Audit Dept (Y/N)
EXISTS	L	1	0	Flag used in the Check In/Check Out process to see if the record existed prior to checkout
PT61_NUM	C	21	0	PT-61 Number
RETT	N	12	2	Real Estate Transfer Tax
INSTRUMENT	C	4	0	Instrument of transfer (Warranty Deed, Quitclaim Deed, etc)
SALES_ADJ	N	11	0	Value deducted from sales price
NET_SP	N	11	0	Sales price less adjustment

Wgsketch				
Field Name	**Type**	**Length**	**Dec**	**Alias**
REPROPKEY	N	10	0	Residential Improvement number
COMMKEY	N	10	0	Commercial improvement number
ACCKEY	N	10	0	Accessory key
MOBILEKEY	N	10	0	Mobile home key
REALKEY	N	10	0	Real property key
RECNUM	N	10	0	Sketch Record Number
IMPKEY	C	4	0	Improvement label
VERTICES	M	10	0	Coordinates of Points (begin/end of line segments)
LABELS	M	10	0	Coordinates of line length
IMPLABEL	M	10	0	Coordinates, label & pt size of label
AREA	N	10	0	Area of improvement
PERIMETER	N	10	0	Perimeter of improvement
EXISTS	L	1	0	Flag used in the Check In/Check Out Process to see If the record existed prior to checkout

WinGAP Files & Orders

Index files are created so that look-ups can be done quickly. For example, if you are looking for Tom Smith in the file and Smith Tom is typed in the name search field, the find on that is almost instant. Index files provide the system with that capability. Because WinGAP uses the FoxPro index engine, the index files that are created when indexing is done have an extension of cdx. Some of the index files may have multiple orders stored within them. For example, the database file, acessory, has one index called acessory with four orders, acckey, commkey, mobilekey, realkey.

There are two primary advantages in creating index files in this manner:

- The efficiency of the system is increased due to the fact that a new index does not have to be opened if the look-up order is changed.
- There are fewer files to deal with reducing file clutter and disk space.

A working knowledge of the WinGAP files and orders can save the user valuable time when using FoxPro to access data. When a file is opened in FoxPro and there is a cdx already created for that database, FoxPro automatically opens the index or cdx file giving the user access to the orders. This prevents the user from having to create an index file.

On the following pages are the files currently being indexed in WinGAP, the cdx that is created, the order(s) that are created, and the index expression that is used in the creation of the order.

WinGAP Files & Orders

Table	CDX	Order	Index Expression
Acc_ctrl	Acc_ctrl	Acc_ctrl	Acctype+comp_no
Acc_ctrl	Acc_ctrl	Acc_desc	Acctype+descrip
Acc_impr	Acc_impr	Acc_impr	Str(sq_ft_from,7,0) + str(sq_ft_to,7,0)
Acc_tbls	Acc_tbls	Tableref	Rescomm+tableref+str(dim1,10,0)+str(dim2,10,0)
Accdes	Accdes	Acres	Acres
Acessory	Acessory	Acckey	Acckey
Acessory	Acessory	Commkey	Commkey
Acessory	Acessory	Mobilekey	Mobilekey
Acessory	Acessory	Realkey	Realkey
Acessory	Acessory	Comp_no	Acc_type + comp_no
Aircraft	Aircraft	Airkey	Airkey
Aircraft	Aircraft	Perskey	Perskey
Apmdepr	Apmdepr	Apmdepr	Item+group+str(year,2,0)
Appeals	Appeals	Appealkey	Appealkey
Appeals	Appeals	Mobilekey	Mobilekey
Appeals	Appeals	Perskey	Perskey
Appeals	Appeals	Realkey	Realkey
Appeals	Appeals	Appeal_yr	9999 - val(appeal_yr)
Asmtrsn	Asmtrsn	Reasoncode	Reasoncode
Asmtrsn	Asmtrsn	Realkey	Realkey
Asmtrsn	Asmtrsn	Perskey	Perskey
Asmtrsn	Asmtrsn	Rk_unique	Realkey unique
Asmtrsn	Asmtrsn	Realrsn	Str(realkey,10,0) + reasoncode + reason
Asmtrsn	Asmtrsn	Persrsn	Str(perskey,10,0) + reasoncode + reason
Audit	Audit	Audit	Perskey
Audit	Audit	Auditkey	Auditkey
Audit_detl	Audit_detl	Adetailkey	Adetailkey
Audit_detl	Audit_detl	Auditkey	Auditkey
Audit_info	Audit_info	Audinfokey	Audinfokey
Audit_info	Audit_info	Auditkey	Auditkey
Avionics	Avionics	Airkey	Airkey
Basectrl	Basectrl	Basectrl	Itemtype+item+item_no
Boat	Boat	Boatkey	Boatkey
Boat	Boat	Perskey	Perskey
Careaprm	Careaprm	Bldgtype	Bldg_type+str(areaovrper,10,5)
Commadds	Commadds	Commadds	Bldg_type+menutype+str(menurespon,2,0)
Commadds	Commadds	Descript	Bldg_type + menutype + descript + str(menurespon,2,0)
Commbase	Commbase	Used_code	Used_code
Commbase	Commbase	Descript	Descript
Commimp	Commimp	Commkey	Commkey
Commimp	Commimp	Improv_no	Str(realkey,10,0)+str(improv_no,3,0)
Commimp	Commimp	Realkey	Realkey
Conmai	Conmai	Conmaikey	Conmaikey

Table	CDX	Order	Index Expression
Conmai	Conmai	Realkey	Realkey
Cost	Cost	Costkey	Costkey
Cost	Cost	Perskey	Perskey
Cost	Cost	P_item	Str(perskey,10,0)+item_desc
Cost	Cost	P_group	Str(perskey,10,0)+str(group,1,0)+str(9999-acq_year,4,0) +item_desc+str(9999999999-cost,10,0)
Cost	Cost	P_acq_year	Str(perskey,10,0)+str(acq_year,4,0)
Cost	Cost	P_cost	Str(perskey,10,0)+str(cost,10,0)
Cost	Cost	P_disp	Str(perskey,10,0)+str(disposals,10,0)
Cost	Cost	P_costval	Str(perskey,10,0)+str(costval,10,0)
Cost	Cost	P_mktval	Str(perskey,10,0)+str(marketval,10,0)
Cost	Cost	P_g_a	Str(perskey,10,0)+str(group,1,0)+str(9999-acq_year,4,0) +item_desc+str(9999999999-cost,10,0)
Costdepr	Costdepr	Costdepr	Str(life,2,0)+str(age,2,0)
Costindx	Costindx	Naics	Naics
Costindx	Costindx	Industry	Indtype+indexyear
Cuvland	Cuvland	Landtype	Landtype
Cwallht	Cwallht	Cwallht	Bldg_type+str(areaovrper,10,5)
Cwallht	Cwallht	Bldgtype	Bldg_type+str(areaovrper,10,5)
Depr	Depr	Depr	Bldgtype+frame+str(grade,4,2)+str(age,3,0)
Depthtbl	Depthtbl	Depthtbl	Depth
Discovr	Discovr	Discovkey	Discovkey
Discovr	Discovr	Desc	Desc
Dnr	Dnr	Dnrkey	Dnrkey
Dnr	Dnr	Perskey	Perskey
Dnr	Dnr	Name	Upper(lname)+upper(fname)+upper(middleinit)
Dnr	Dnr	Ga_reg	Upper(ga_reg)
Editlog	Editlog	Filename	Filename
Editlog	Editlog	Chgappr	Chgappr
Editlog	Editlog	Editdate	Editdate
Editlog	Editlog	Pkey	Pkey
Editlog	Editlog	History	Filename + str(pkey,10,0) + str(9999999999 -val(dtos(editdate)),10,0)
Firepl	Firepl	Firekey	Firekey
Firepl	Firepl	Repropkey	Repropkey
Fsupply	Fsupply	Supplykey	Supplykey
Fsupply	Fsupply	Perskey	Perskey
Homestd	Homestd	Homestd	Taxdistric+exempt
Images	Images	Imagekey	Imagekey
Images	Images	Acckey	Acckey
Images	Images	Commkey	Commkey
Images	Images	Repropkey	Repropkey
Implabel	Implabel	Label	Upper(label)
Implabel	Implabel	Comp_no	Upper(comp_no)
Implabel	Implabel	Descrip	Upper(descrip)
Implabel	Implabel	Bldgtype	Bldgtype+label

Table	CDX	Order	Index Expression
Inc_detail	Inc_detail	Realkey	Realkey
Inc_detail	Inc_detail	Detailkey	Detailkey
Inc_model	Inc_model	Modelkey	Modelkey
Invn	Invn	Invnkey	Invnkey
Invn	Invn	Perskey	Perskey
IO	IO	IO	Upper(brand) + upper(year) + upper(model)
Irsclass	Irsclass	Irsclass	Irscls
Labltype	Labltype	Labltype	Labeltype
Landsubs	Landsubs	Landkey	Landkey
Landsubs	Landsubs	Realkey	Realkey
Landsubs	Landsubs	Conmaikey	Conmaikey
Lessor	Lessor	Leskey	Leskey
Lessor	Lessor	Ownkey	Ownkey
Lessor	Lessor	Perskey	Perskey
Lessor	Lessor	Leskey	Leskey
Lessor	Lessor	Perskey	Perskey
Life	Life	Grade	Bldgtype+str(grade,4,2)+wallframe
Livestck	Livestck	Livekey	Livekey
Livestck	Livestck	Perskey	Perskey
Mapchg	Mapchg	Mapkey	Mapkey
Mapchg	Mapchg	Commkey	Commkey
Mapchg	Mapchg	Realkey	Realkey
Mapchg	Mapchg	Repropkey	Repropkey
Mobile	Mobile	Mobilekey	Mobilekey
Mobile	Mobile	Ownkey	Ownkey
Mobile	Mobile	prebmapid	Prebmapid
Mobile	Mobile	Repropkey	Repropkey
Mobile	Mobile	Street_no	Upper(street_nam+str(house_no,5,0))
Mobile	Mobile	Street	Street_nam+sttype+stdirect+str(house_no,5,0) +extension
Mobile	Mobile	Decalnum	Upper(decalnum)+upper(decalyr)
Mobile	Mobile	Serialnum	Upper(serialnum)
Mobile	Mobile	Mh_count	Mobilekey
Mobmfgta	Mobmfgta	Mfgmodel	Upper(mobmfg+mobmodel)
Mobmfgta	Mobmfgta	mfgunique	Upper(mobmfg) unique
Mobmfgta	Mobmfgta	Modelmfg	Upper(mobmodel+mobmfg)
Msizadj	Msizadj	Msizadj	Mobwidth+moblength+mobclass
Msizadj	Msizadj	Mobclass	Mobclass+mobwidth+moblength
Nada_dep	Nada_dep	Year	Year
Nada_mfg	Nada_mfg	Mfg	Upper(mfg)
Nada_mfg	Nada_mfg	Mfgid	Mfgid
Nada_model	Nada_model	Model	Upper(model)
Nada_model	Nada_model	Modelid	Modelid
Nada_modifiers	Nada_modifiers	Chart	Endchart
Nada_modifiers	Nada_modifiers	Condition	Str(endchart,3,0) + str(condition,1,0)

WinGAP Files & Orders

Table	CDX	Order	Index Expression
Nada_oldhome	Nada_oldhome	Beginchart	Beginchart
Nada_svs	Nada_svs	Width	Upper(quality)+str(width,2,0)
Nada_svs_category	Nada_svs_category	Svs_page	Svs_page
Nada_tipout	Nada_tipout	Beginchart	Beginchart
Nada_white	Nada_white	Nada_white	Str(MfgID,5,0)+Str(ModelID,6,0)+Str(Width,2,0)
Nada_yellow	Nada_yellow	Yellow	Str(chartno,6,0)+str(width,2,0)+str(length,2,0)
Naics	Naics	Naics	Naics
Naics	Naics	Valnaics	Val(naics)
Naics	Naics	Naicstext	Upper(naicstext)
Neighbor	Neighbor	Neighbor	Neigh
Neighbor	Neighbor	Desc	Upper(description)
Newowner	Newowner	Newkey	Newkey
Newowner	Newowner	Ownkey	Ownkey
Newowner	Newowner	Realkey	Realkey
Newowner	Newowner	Name	Upper(lastname+firstname+middle)
Newowner	Newowner	Name	Upper(lastname)+upper(firstname)+upper(middle)
Notices	Notices	Realkey	Realkey
Notices	Notices	Perskey	Perskey
OB	OB	OB	Upper(brand) + upper(year) + upper(model)
Om	Om	Om	Upper(brand) + upper(year) + upper(model)
Other	Other	Otherkey	Otherkey
Other	Other	Perskey	Perskey
Owner	Owner	Ownkey	Ownkey
Owner	Owner	Name	Upper(lastname)+upper(firstname)+upper(middle)
Owner	Owner	Zip	zip + upper(lastname) + upper(firstname) + upper(middle)
Permits	Permits	Permkey	PermKey
Permits	Permits	Realkey	Realkey
Permits	Permits	Parcel_no	Parcel_no
Permtype	Permtype	Perm_type	Perm_type
Personal	Personal	Perskey	Perskey
Personal	Personal	Busi_id	Upper(busi_id)
Personal	Personal	Coid	Upper(co_id_num)
Personal	Personal	Ownkey	Ownkey
Personal	Personal	Street	Upper(st_name+st_type+st_direct+str(st_num,5,0) +st_ext)
Personal	Personal	Street_no	Upper(st_name+str(st_num,5,0))
Personal	Personal	Parcel_no	Parcel_no
Personal	Personal	Pers_count	Perskey
PH	PH	PH	Upper(brand) + upper(year) + upper(model)
pt283	Pt283	Loname	Upper(loname)+str(saleyear,4,0)+str(quarter,1,0)
pt283	Pt283	Parcel_no	Upper(parcel_no)
pt283	Pt283	Purname	Upper(purname)+str(saleyear,4,0)+str(quarter,1,0)

Table	CDX	Order	Index Expression
pt283	Pt283	Pt283key	Pt283key
Pt50r	Pt50r	Realkey	Realkey
Pt50r	Pt50r	Name	Uupper(lastname) + upper(firstname) + upper(middle)
Pt50r	Pt50r	Parcel_no	Parcel_no
Pt61_actor	Pt61_actor	Filing_id	Filing_id
Pt61_actor	Pt61_actor	Name	Upper(lastname) + upper(firstname) + upper(middle)
Pt61_actor	Pt61_actor	Actor_role	Upper(actor_role) + upper(lastname) + upper(firstname) + upper(middle)
Pt61_actor_temp	Pt61_actor_temp	Filing_id	Filing_id
Pt61_filing	Pt61_filing	Filing_id	Filing_id
Pt61_filing	Pt61_filing	Doc_num	Doc_num
Pt61_filing	Pt61_filing	Deed	Deed_book + deed_page
Pt61_filing	Pt61_filing	Date_enter	Date_enter
Pt61_filing	Pt61_filing	Add_date	Dtos(add_date)
Pt61_filing	Pt61_filing	Worked	Worked
Pt61_filing_temp	Pt61_filing_temp	Filing_id	Ffiling_id
Pt61_lookup	Pt61_lookup	Buyer	Upper(buyer) + str(filing_id, 20, 0)
Pt61_lookup	Pt61_lookup	Seller	Upper(seller) + str(filing_id, 20, 0)
Pt61_lookup	Pt61_lookup	Parcel_No	Upper(parcel_no) + str(filing_id, 20, 0)
Pt61_lookup	Pt61_lookup	Account_No	Upper(account_no) + str(filing_id, 20, 0)
Pt61_lookup	Pt61_lookup	Saledate	Upper(saledate) + str(filing_id, 20, 0)
Pt61_lookup	Pt61_lookup	Deed_bk_pg	Upper(deed_bk_pg) + str(filing_id, 20, 0)
Pt61_lookup	Pt61_lookup	Pt61_no	Upper(pt61_no) + str(filing_id, 20, 0)
Pt61_lookup	Pt61_lookup	Prop_addr	Upper(prop_addr) + str(filing_id, 20, 0)
Pt61_lookup	Pt61_lookup	Real_pin	Upper(real_pin) + str(filing_id, 20, 0)
Pt61_prop	Pt61_prop	Filing_id	Filing_id
Pt61_prop	Pt61_prop	Sale_date	Dtos(sale_date)
Pt61_prop	Pt61_prop	Parcel_no	Upper(parcel_no)
Pt61_prop	Pt61_prop	Account	Upper(account)
Pt61_prop	Pt61_prop	Street_nam	Upper(street_nam + sttype + stdirect + house_no + extension)
Pt61_prop	Pt61_prop	Street_no	Upper(street_nam + house_no)
Pt61_prop_temp	Pt61_prop_temp	Filing_id	Filing_id
Pt61_tax	Pt61_tax	Filing_id	Filing_id
Pt61_tax_temp	Pt61_tax_temp	Filing_id	Filing_id
Ptvalues	Ptvalues	Year	Year
Pw	Pw	Pw	Upper(brand) + upper(year) + upper(model)
Rank	Rank	Descript	Descript
Rank	Rank	Rank	Rank
Ratio	Ratio	Ratio	Ratio
Ratio	Ratio	Salekey	Salekey
Ratio	Ratio	Totalacres	Totalacres
Ratio	Ratio	Parcel_no	Upper(parcel_no)
Ratio	Ratio	Neighbhood	Upper(neighbhood)
Ratio	Ratio	Grantor	Upper(grantor)

Table	CDX	Order	Index Expression
Ratio	Ratio	Grantee	Upper(grantee)
Ratio	Ratio	Saleclass	Upper(saleclass)
Realprop	Realprop	Realkey	Realkey
Realprop	Realprop	Ownkey	Ownkey
Realprop	Realprop	Parcel_no	Parcel_no
Realprop	Realprop	Street_nam	Upper(street_nam + sttype + stdirect + str(house_no,5,0) + extension)
Realprop	Realprop	Street_no	Upper(street_nam+str(house_no,5,0))
Realprop	Realprop	O_pin	Str(ownkey,10,0)+parcel_no
Realprop	Realprop	Neighbhood	Neighbhood + parcel_no
Realprop	Realprop	Subd_name	Subd_name + subd_phse + subd_sec + subd_blk + subd_lot
Realprop	Realprop	Real_count	Realkey
Reason	Reason	Reason	Reasontype+reasoncode
Reason	Reason	Desc	Reasontype + reason
Reprop	Reprop	Repropkey	Repropkey
Reprop	Reprop	Realkey	Realkey
Rurland	Rurland	Landtype	Landtype
Saleinfo	Saleinfo	Salekey	Salekey
Saleinfo	Saleinfo	Realkey	Realkey
Saleinfo	Saleinfo	Date_desc	Str(realkey,10,0) + str(9999999999 - val(dtos (saledate)),10,0)
Sb	Sb	Sb	Upper(brand) + upper(year) + upper(model)
Splits	Splits	Splitkey	Splitkey
Splits	Splits	Realkey	Realkey
Street	Street	Street	Street_nam+stdirect+sttype
Subdivis	Subdivis	Subdivcode	Subdivcode
Subdivis	Subdivis	Subdivname	Upper(subdivname)
Subdivisions	Subdivisions	Subd_name	Subd_name
Taxdist	Taxdist	Taxdistric	Taxdistric
Users	Users	Users	Loginid
Wgsketch	Wgsketch	Realkey	Realkey
Wgsketch	Wgsketch	Acckey	Acckey
Wgsketch	Wgsketch	commkey	Commkey
Wgsketch	Wgsketch	Impkey	Upper(impkey)
Wgsketch	Wgsketch	mobilekey	Mobilekey
Wgsketch	Wgsketch	repropkey	Repropkey
Zip	Zip	Zip	Zip

WinGAP File Relationships

The 95 primary databases are related or connected to at least one other database via a field called a key. The value in the "key" field will be the same in the related databases, and in most cases the field name will be the same. In the examples below, different types of WinGAP relational situations are depicted.

Example 1:

For example, Tom Smith owns parcel 001-002 and personal property that is identified as account 2778. The ownership information for Tom Smith is stored in the Owner file. The record that contains that data is given a unique number by WinGAP (in this case let's say the number was 5663). That number is stored in the field called ownkey. When real parcel 001-002 is added to the system, that information is stored in a file called Realprop. The name of Tom Smith is not saved in the Realprop file but instead the number of 5663 is stored in the file Realprop in the field called ownkey.

The same situation occurs with the personal property account 2778 that is owned by Tom Smith. The account is added to the file called Personal where 5663 is saved in the field called ownkey thus relating the account to the ownership information.

The field ownkey that is found in Owner is defined as a *primary key*. That means the value in that field is unique. It will occur only once in the Owner file. Tom Smith's record in Owner is known as a *parent*. In the files Realprop and Personal, the ownkey field is known as a *foreign key.* If Tom Smith owns multiple real property parcels and/or personal property accounts, his ownkey will appear in the Realprop file the same number of times as the number of parcels he owns. It will also appear in the Personal file the same number of times as the number of personal property accounts he has been assigned. In this case, the parcels and personal accounts are known as *child* records with relation to the Owner file.

Example 2:

In some relational situations the relating key is not necessarily a number. This type of situation exists with accessory improvements and the schedule that is used to value such improvements. In the accessory schedule, found in the file called Acc_ctrl, a field called comp_no is given a unique value when a schedule item is added. The value of comp_no is not necessarily a number but it is unique. In the process of adding an accessory improvement, the user selects the improvement type from a list of available accessory items found in Acc_ctrl. When the accessory is saved in the file called Acessory, the comp_no that was assigned to that schedule item in Acc_ctrl is stored in the Acessory field also called comp_no. This becomes the link back to the schedule so that descriptions that are saved in acc_ctrl can be printed on prc's, and later schedule updates can be passed down to the Acessory records when reappraise is run. The parent records here are found in Acc_ctrl where comp_no is a primary key. Acessory contains the child records with the foreign key of comp_no.

Example 3:

In some situations a much more complicated relationship exists than in the two examples above. Such a situation is in the relationship between reason codes for change of assessments, overrides, and sales qualification and the table that holds the codes and associated descriptions

In this case, the relationship is not a simple field-to-field association. The file called Reason contains all of the codes and descriptions so it is the parent file. Realprop and Personal are the files that hold the child records. However, all types of reasons for real and personal property are contained in the Reason file so additional information must be used in order to locate and present the correct description for the reason code.

If the description for an change of assessment reason is to be found in the Reason file, the following information must be known:

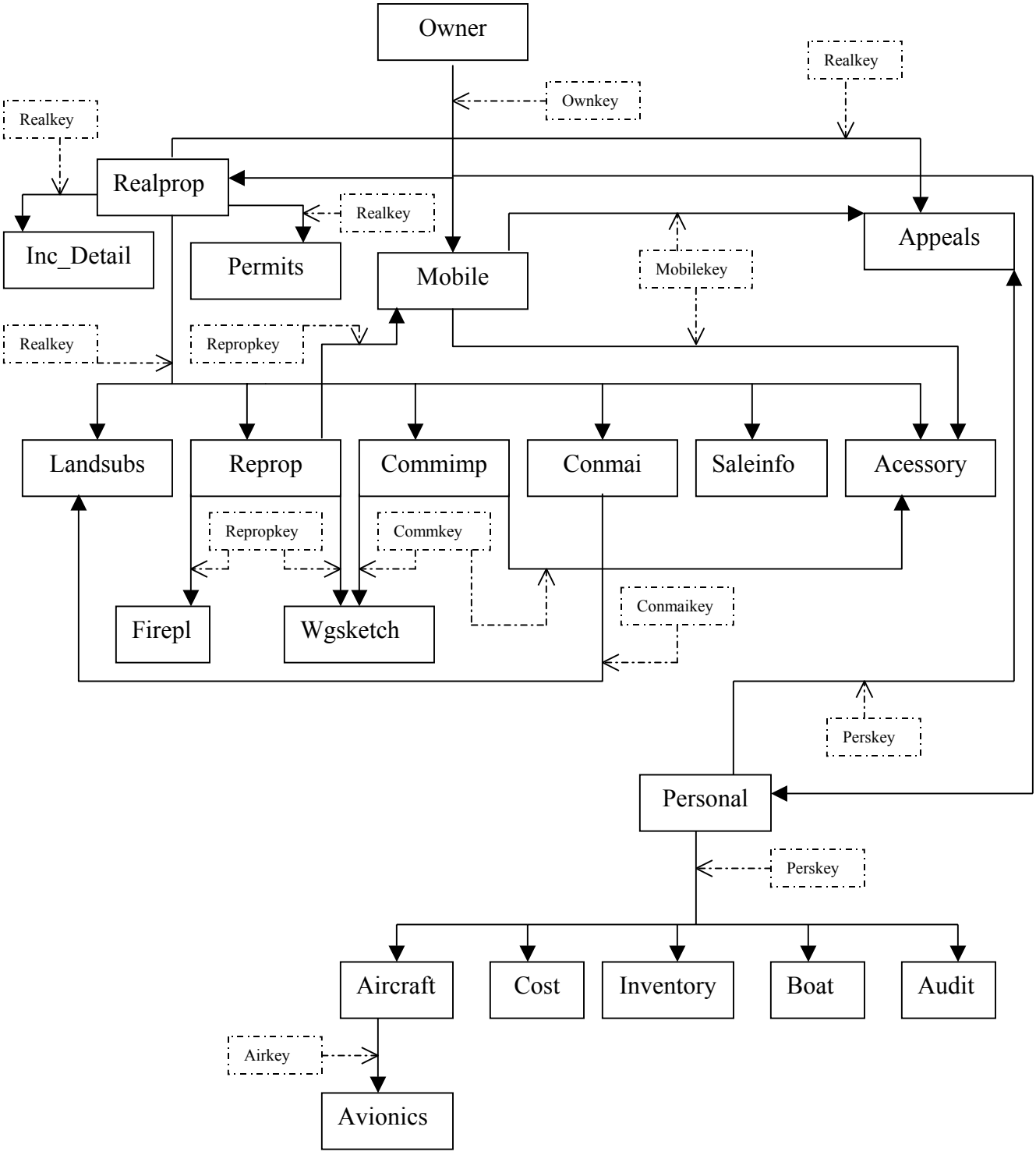
- reason code
- property type
- reason type

If the assessment reason code for change of ownership is assigned to a real property parcel and that code is CO, then the reason code is CO, the property type is R for real, and the reason type is A for change of assessment. There is no one field found in the parent file of Reason that contains those three items. Three fields, proptype, reasontype, and reasoncode, are put together or concatenated to create the primary key that can be located along with the associated description.

All relationships can be defined as one of two types, one-to-many or many-to-one. In the example one above, if you were looking for the owner of a real property parcel then the relationship is one-to-many. There are many real property parcels but you are trying to find the single owner of a particular parcel. However, if you know the owner and are trying to locate all of the parcels the owner may have, that becomes a many-to-one relationship. In this case, you have a single parent record that may have multiple child records linked to it. When using the Report Designer, ReportPro takes care of setting these two different relationships. However, when using FoxPro, the user must make recognize these types of relationships and take the appropriate steps to set the relationship properly or incorrect information may be applied or presented.

On the following page is a graphical representation of the major files in WinGAP and their association with other files. The files are found in the solid-lined boxes and the solid arrows point to the child file(s). The information found in the broken-lined boxes is the key that links the files. The broken arrows point to the relationship line that the key is associated with.

WinGAP File Relationships Chart



WinGAP Database Management

There are two primary database management tools that can be used with WinGAP files, VODBX32 and FoxPro. VODBX32 is the integrated database manager that can be found in WinGAP under the **Tools >> Database Utility** menu option. VODBX32 is a graphical sub-application that allows the user to open files, make modifications to data and perform some of the more routine database functions. Though handy, its functionality is somewhat limited and speed is not a strong point of VODBX32.

FoxPro/Visual FoxPro is a command line oriented database manager. It offers the user the full range of database management tools, WinGAP compatibility, and speed. However, FoxPro is not an integrated function within WinGAP and must be purchased by the user. The increased functionality and speed obtained with FoxPro more than justifies the additional expense. Since FoxPro is the preferred database manager of the WinGAP technical support team, the database management portion of the class will be primarily dedicated to the use of FoxPro and its command line oriented system.

There are several other database management programs that can used with WinGAP, but various restrictions apply when using these programs. For example, WinGAP database files can be opened using both Microsoft Excel and Microsoft Access, but under no circumstances should the file that is opened be saved using the same name as a WinGAP database file. If this is done, the user will be forced to use a backup, as WInGAP will no longer operate. The same applies for Microsoft SQL Server.

The following applications can be used to open WinGAP data tables but under no circumstances should they be used to update WinGAP tables. Also, a user must understand that opening a “live” WinGAP table with other applications could result in errors from WinGAP users in a network environment.

1. Microsoft Excel
2. Microsoft Access
3. Microsoft SQL Server
4. Advantage Database Server (rules regarding opening/saving tables/data do not apply with ADS)

The remainder of the discussion in this manual that relates to Database Management will deal only with using Foxpro to manage WinGAP data. Before effectively working with FoxPro, the user must become familiar with the terminology and commands. On the following pages, some of the most used terminology and commands will be explained.

WinGAP Database Management

Data/Field Types

There are 5 basic data/field types that are used in the WinGAP databases, character, numeric, date, logical, and memo. The user must be aware of the type of data that is stored in a field and apply the applicable rules before performing any type of operation on the data. Below are the five data types and any rules that should be applied:

1. **Character** - Fields of this data type can hold any characters that can be keyed from the keyboard. Letters, numbers, punctuation and special symbols can all be stored in this field type. The basic rules for working with character data/fields are:
    a. Character data cannot be placed in a numeric, date, or logical field without being converted to the other data type
    b. Character data in a command must be delimited with ‘ or “
2. **Numeric** – Numeric data/fields only hold numbers, minus signs, or decimal points. The basic rules for working with number data/fields are:
    a. Numeric data cannot be placed in character fields without delimiting it with ‘ or “.
    b. If the value of the numeric data exceeds the field length, *’s are placed in the field.
3. **Date** – Date data/fields are special types that hold data formatted with the standard data format, mm/dd/yy. The basic rules for working with date data/fields are:
    a. If date data/fields are to be manipulated with commands, data must be converted to the proper format with one of the appropriate date functions, DTOC(), CTOD(), or DTOS().
4. **Logical** – Logical data/fields consist of True or False values. Logical data must be delimited with periods (..). The applicable rules for working with logical data/fields are**:**
    a. Logical operator of .not. is used when false values are sought.
    b. Logical values are never equal to T or F. Never use the command, COUNT FOR VAL_CHG = ‘T’. Instead the command should state, COUNT FOR VAL_CHG or COUNT FOR .NOT. VAL_CHG. The command COUNT FOR ! VAL_CHG can also be used instead of COUNT FOR .NOT. VAL_CHG.
    c. Only a .T. or .F. may be placed in a logical field
5. **Memo** – Memo fields are special character fields that have no fixed length. They will accept the same type of data as a character field. Databases that contain a memo field have a companion file with the same name but with an extension of FPT. The rules for working with memo data are:
    a. Never delete an FPT file unless you delete the DBF file.
    b. If a DBF file with the a memo field is renamed, the memo file must be renamed to the new name of the DBF.

WinGAP Database Management

Operators

Operators are functions that allow the user to perform operations on data and combine data or expressions. There are three primary operator types used in WinGAP database management. Each will be discussed below:

1. **Mathematical** – used in mathematical operations with the exception of the plus sign (+) which can be used to combine text
    a. + : adds numbers or fields and concatenates character fields
        i. 7 + 2 = 9
        ii. a_value + p_value = land value
        iii. digclass + digstrat = digest code (R + 1 = R1)
    b. - : subtracts numbers of fields
        i. 6 – 4 = 2
        ii. total_invn – total_net = taxable inventory
    c. * : multiplies numbers or fields
        i. 8 * 7 = 56
        ii. curr_val * .40 = assessment
    d. / : divides numbers or fields
        i. 10 / 2 = 5
        ii. invn_val / bldgsf = inventory per square foot
    e. ^ or ** : exponentiation of numbers or fields
        i. 3 ** 3 = 27
        ii. timp_val ** .5 = square root of improvement value
    f. () : groups expressions; otherwise, hierarchy of MDAS is used
        i. (6 + 4) / 2 = 5
        ii. (a_value + p_value) / totalacres = land $ per acre

2. **Relational** – used to compare two values
    a. < : less Than
        i. 6 < 8
        ii. heatedarea < 1000
    b. > : greater than
        i. 10 > 9
        ii. curr_val > a_value + p_value
    c. = : equals to
        i. 3 = 3
        ii. lastname = ‘SMITH’
    d. <> or # : not equal to
        i. a <> b
        ii. parcel_no # ‘001’
    e. <= : less than or equal to
        i. meff_val <= 50000
    f. >= : greater than or equal to
        i. invn_val > = 100000

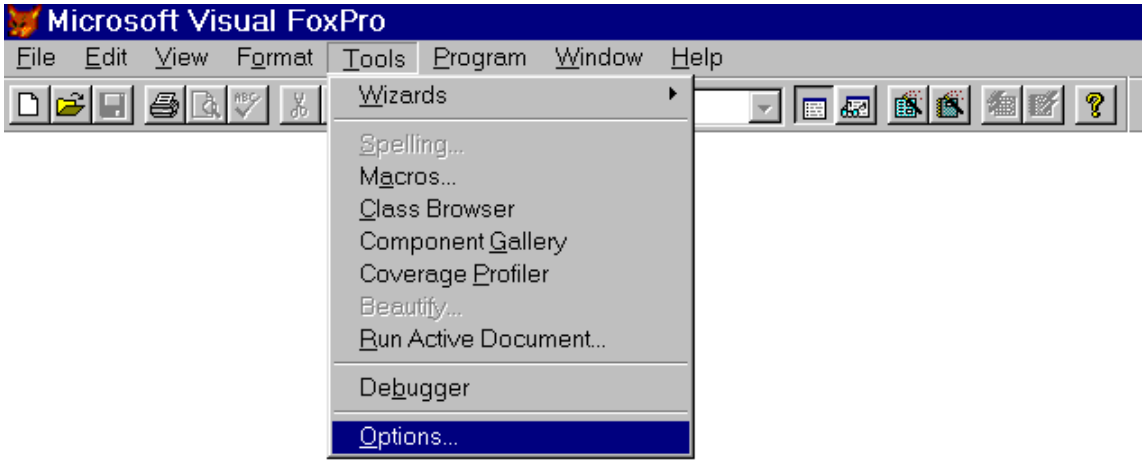
3. **Logical** - compares two or more expressions that use mathematical or relational operators
    a. .and. : both compared expressions must be true
        i. grade > 1.00 .and. heatedarea < 1000
    b. .or. : either of the expressions may be true
        i. lastname = 'SMITH' .or. lastname = 'JOHNSON'
    c. .not. : expression is not true
        i. .not. notice
    d. () : used for grouping
        i. (propclass='C' .or. propclass='I') .and. invn_val > 100000

As can be seen in some of the examples above, all 3 operators can be used in various combinations to produce the desired results.

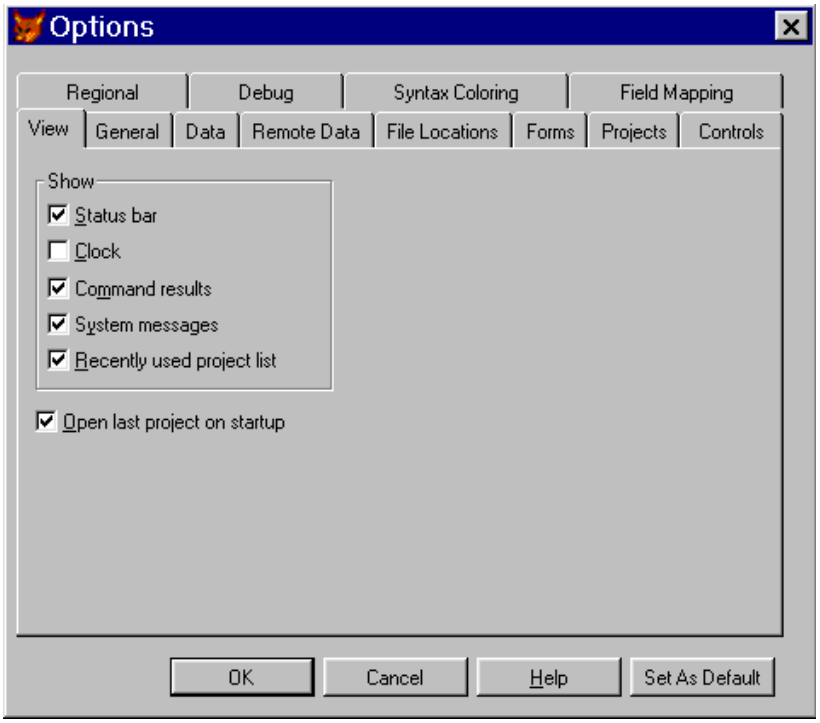
WinGAP Database Management

FoxPro Setup and Defaults

FoxPro can be setup or customized to a user's preference with the use of default parameters. These parameters are established by running Foxpro, clicking on the Tools option on the Foxpro menu/caption bar, and then selecting the Options item on this menu.

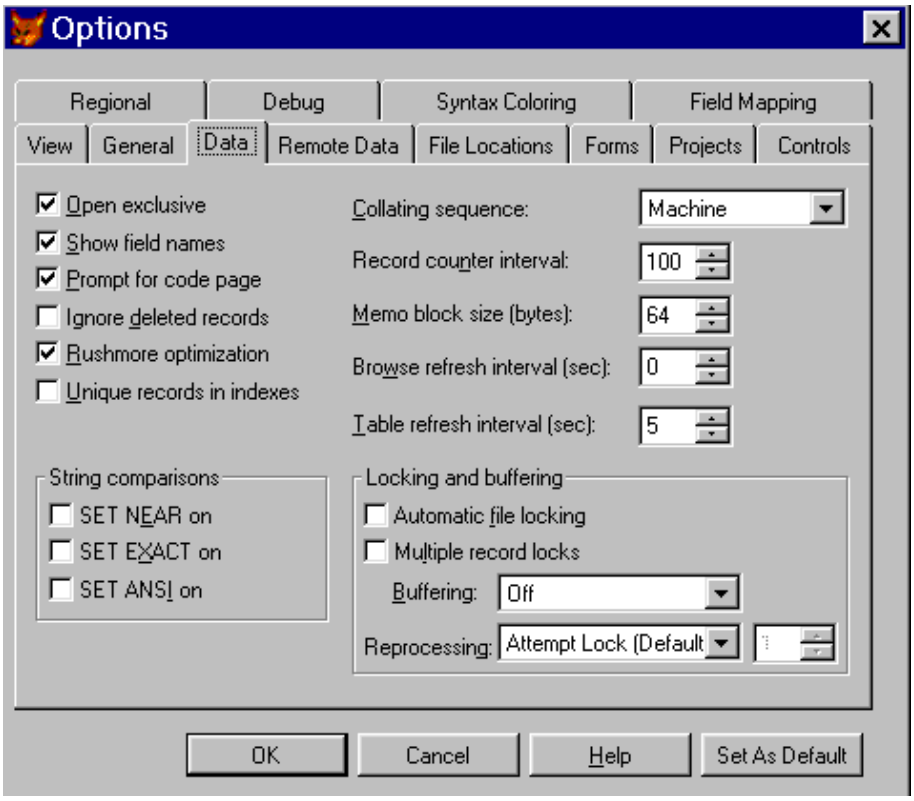


This will produce the Options Form, as seen below. The form below, from Version 6.0 of FoxPro, and some of the steps that follow may vary somewhat depending on the FoxPro version that is installed. However, the basic steps and default settings are the same.



First, the default checkmarks in the checkboxes on the View Tab on the Options Form, previous page, should be retained, in order for such things as the Status Bar and Command Results to be visible to the user.

Next, the Data Tab should be clicked. There are four items on this Form that require attention.



- **Open exclusive**

The user must first decide whether files are to be opened exclusively, or shared. If the checkmark is kept next to the "Open Exclusive" item, users will in almost all cases have to get out of WinGAP whenever Foxpro routines are run. It is best to remove the checkmark next to this item in order to use Foxpro in conjunction with WinGAP data.

- **Show Field Names**

Specifies whether Visual FoxPro displays a field name as a column heading above each field in the output of the AVERAGE, CALCULATE, DISPLAY, LIST, and SUM commands.

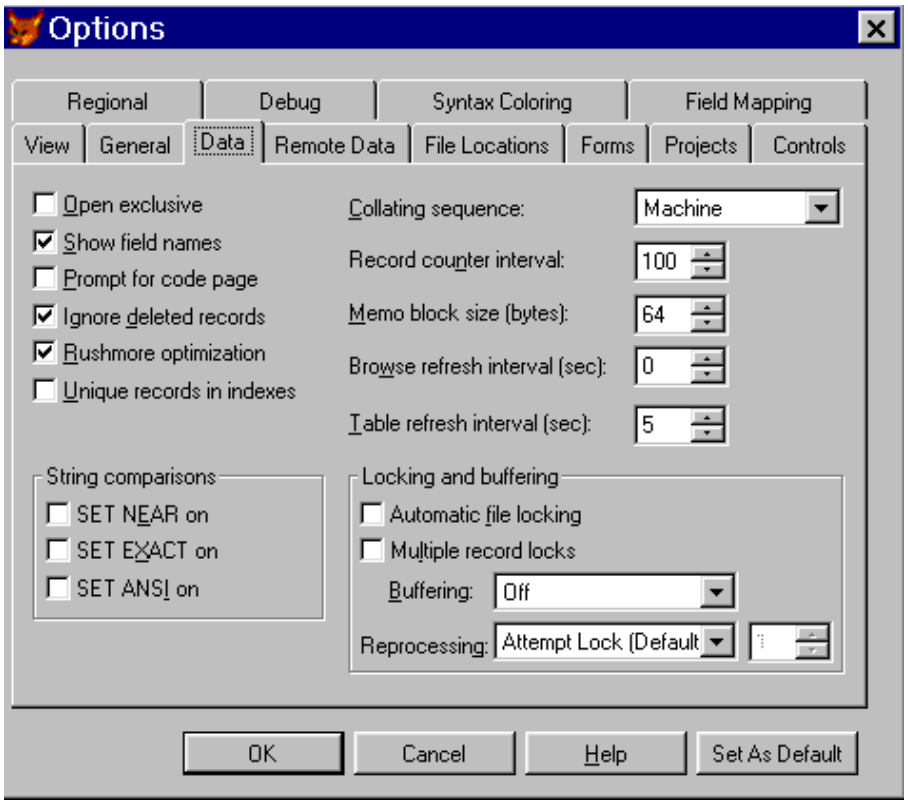
- **Prompt for code page**

Next, the user should remove the checkmark next to the "Prompt for code page" item, as this is not necessary when running Foxpro.

- **Ignore deleted records**

Finally, the user should place a checkmark next to "Ignore deleted records", as it is normally not necessary to include deleted records in any Foxpro routines that are run.

When finished, the Data Tab should appear as shown below.

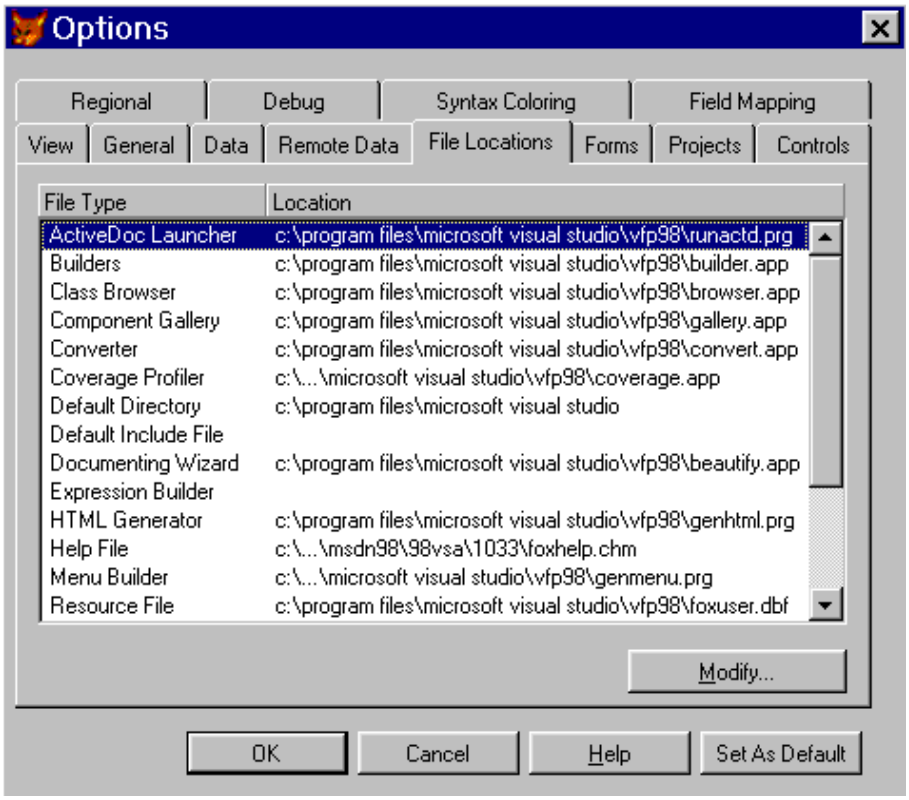


Establishing/Modifying FoxPro Default Directory

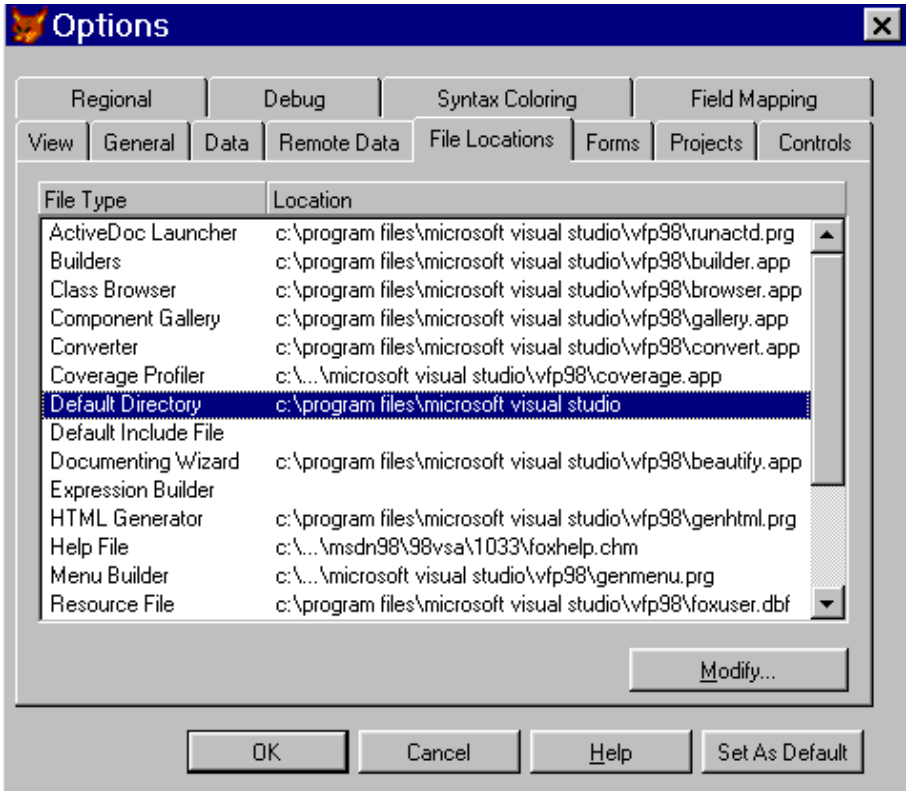
If the user desires, FoxPro can be set to start up in a directory/folder other than the applications standard default folder. Setting FoxPro to start up inside the folder which contains the appraisal year folders provides the user with quick access to data in any appraisal year. The command CD followed by the appraisal year name will place the user in the folder containing the WinGAP data files. The “CD” command will be discussed in detail later in the manual.

For the example used below, WinGAP is found in the folder c:\program files\wingap. The appraisal year folders are in c:\program files\wingap\data.

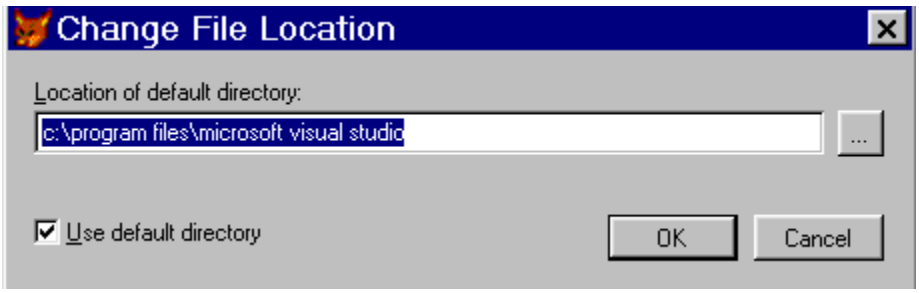
To establish or Modify the FoxPro default directory, the File Locations Tab should be clicked, and the Options Form will appear as shown on the next page.



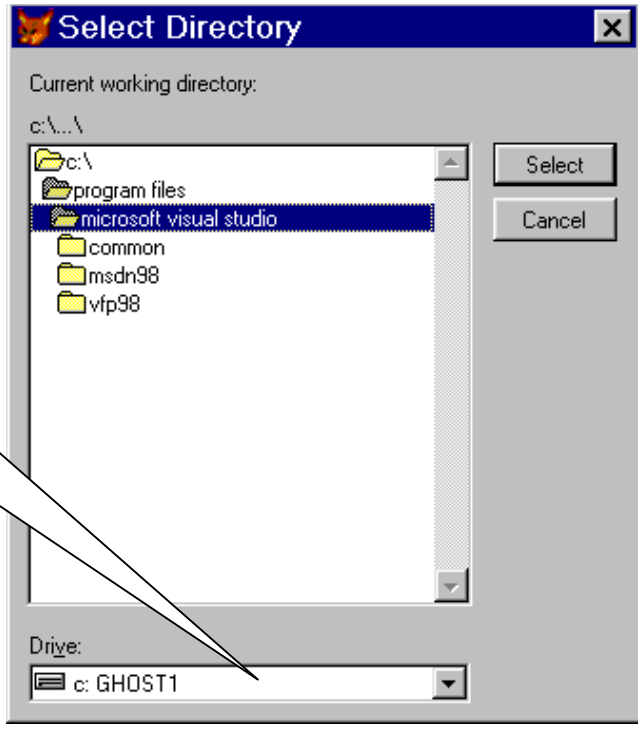
The Default Directory item, about halfway down the list box, should be clicked.



The Modify Button, above, should be clicked to change the FoxPro default directory (in this case c:\program files\ microsoft visual studio), which will produce the Change File Location window.

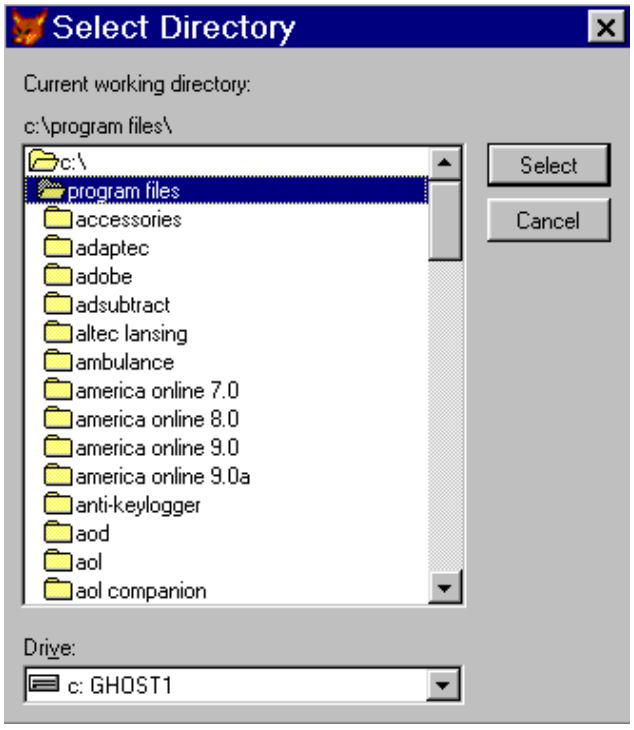


The  Button to the right of the default directory field should be clicked to produce the Select Directory dialog box.

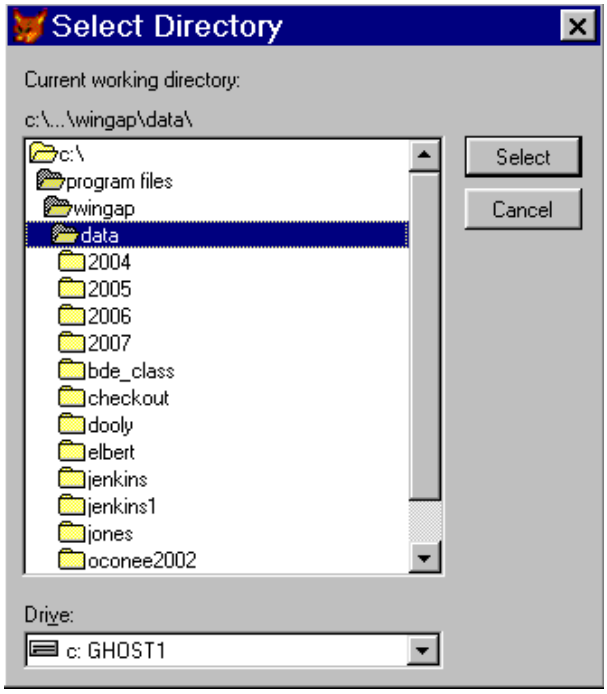


As noted above, if the WinGAP data is located on a network drive, the Drive combo box at the bottom of the Select Directory dialog box can be clicked to select the network drive.

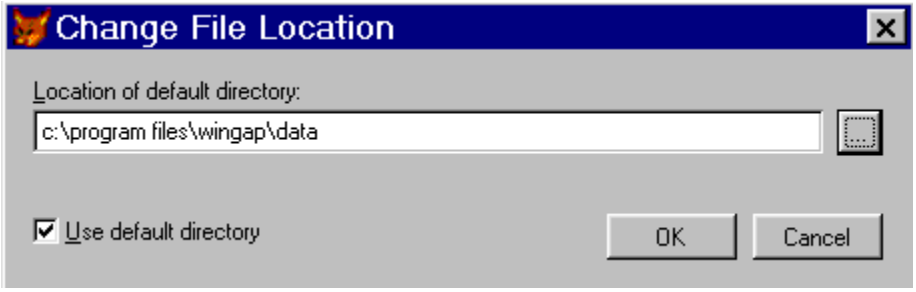
The program files folder should be double clicked to expand the subfolders within that folder.



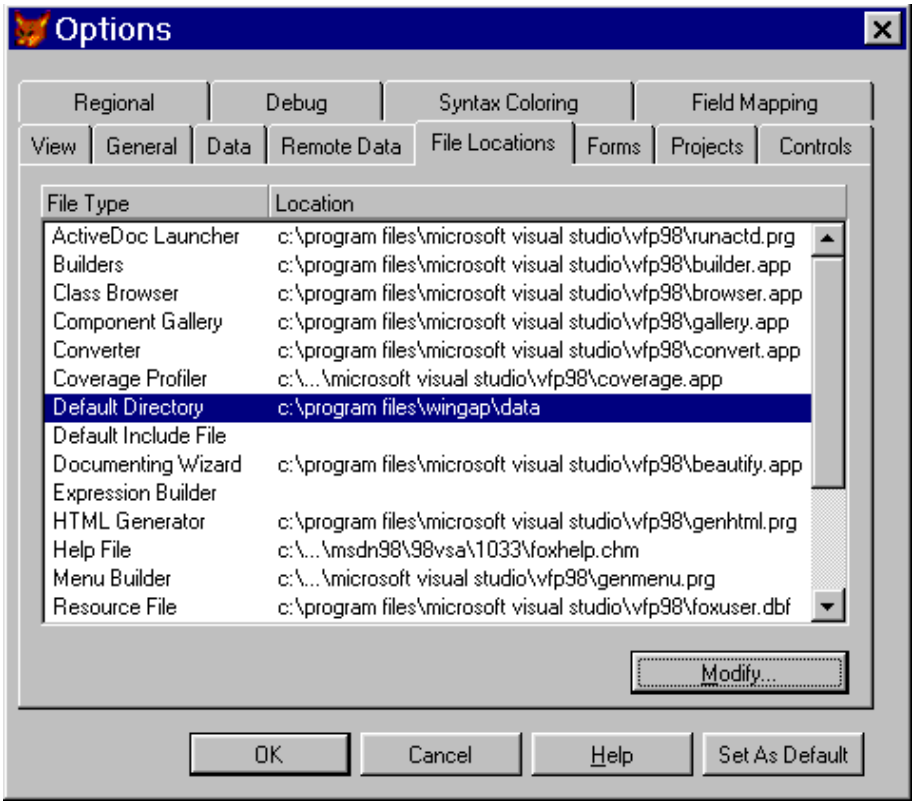
The WinGAP folder within Program Files should be located and double clicked to expand the subfolders within that folder. Finally the Data Folder within WinGAP should be located and double clicked, producing the dialog box seen below.



The Select Button should now be clicked, which will return the user to the Change File Location window. At this point, it is extremely important that a checkmark be placed to the left of "Use default directory", as seen on the next page.



This ensures that each time Foxpro is run, it will use the c:\Program Files\WinGap\Data path as the default location. The OK Button should be clicked to return the user to the Options Form, as seen below.



At this point, before leaving the Options form, the **Set as Default** button should be clicked to save as defaults all of the changes that were made on both the Data Tab and the File Locations Tab. The **OK** Button can then be clicked on the Options Form to save all the changes that have been made to the Foxpro defaults.

WinGAP Database Management

Commands and Syntax

In order to perform operations in FoxPro the user must issue commands and use the proper syntax. The commands and syntax are very structured and must be adhered to or the user will receive error messages and/or undesirable results. Below is a list of the most commonly used commands with accompanying syntax:

1. **SET DELETE ON:** The command hides deleted records from any and all FoxPro activity. **SET DELETE OFF** provides user access to deleted records.

2. **SET SAFETY OFF:** This command is used when the user desires not to be prompted when files will be overwritten. **SET SAFETY ON** turns the prompting feature back on.

3. **SET EXCL OFF:** The command sets up the environment to allow the file to be opened in FoxPro at the same time users are operating in WinGAP. **SET EXCL ON** is used when a user desires to open a file and allow no other users access to the data.

4. **CD:** The CD command, if issued alone, is used to provide information concerning the location where FoxPro is being operated. If CD is issued with path information, the command places the user in the directory/folder specified in the path.

   Syntax

   CD cPath

   Examples

   a. CD {displays the directory/folder where FoxPro is being operated}
   b. CD .. {moves the user up one level in the directory tree}
   c. CD 2008 {moves the user into the 2008 folder from the directory level just above 2008 which is usually the data folder}

5. **USE**: The verb USE is the command that opens a database file. USE must be followed by the name of a database file which is to be opened, which becomes the active database file. The USE command along with the database file to be opened must precede all other commands, with the exception of the RUN command and the environmental settings discussed in commands 1 – 3 above.

   Syntax

   USE [Database Name]
   [EXCLUSIVE]
   [SHARED]
   [NOUPDATE]

   Database Name The name of any database/table

   EXCLUSIVE Opens a table for exclusive use on a network. For more information on the exclusive use of tables, see SET EXCLUSIVE.

SHARED Opens a table for shared use on a network. SHARED allows you to open a table for shared use even when EXCLUSIVE is set ON.

NOUPDATE Prevents changes to the table and its structure.

Examples

USE OWNER SHARED
USE PERSONAL EXCLUSIVE
USE REALPROP NOUPDATE
USE with no filename will close databases that are open.

6. **BROWSE:** BROWSE is an edit command that presents all the fields or specified fields in the database in columns. A database must be opened with the USE command before BROWSE can be used. If the BROWSE command is issued alone, all database fields are displayed. If FIELDS and a field list are added after the BROWSE command, only the designated fields are shown. The BROWSE command can also be conditioned.

Syntax

BROWSE [FIELDS FieldList] [FOR lExpression1] [NOEDIT]

FIELDS FieldList Multiple fields can compose the FIELDS-FieldList. Fields must be separated by commas. The FieldList normally consists of fields found in the open database(s) but may contain an expression that consists of a combination of fields in a numeric formula or a concatenation of character data.

FOR lExpression1 Allows the user to display only records that meet a set of criteria setup in lExpression1. lExpression1 may consist of a single criteria or multiple criteria connected with logical operators (.and. / .or.)

NOEDIT Prevents a user from modifying the table. If you include NOEDIT, you can browse or search the table, but you cannot edit it. However, you can append and delete records.

Examples

a. USE MOBILE
   BROWSE – full field editing
b. USE MOBILE
   BROWSE FIELDS MOBILEKEY,MFG,MODEL – provides editing capabilities for only the mobilekey, mfg, and model fields in the mobile database
c. USE MOBILE
   BROWSE FIELDS MOBILEKEY,MFG,MODEL, MOBTYPE FOR MOBTYPE = 3 – provides editing capabilities for only the mobilekey, mfg, and model fields when the mfg housing type is prebilled.
d. USE REALPROP
   BROWSE FIELDS PER_ACRE = (A_VALUE + P_VALUE) / TOTALACRES FOR TOTALACRES > 0 – displays an expression that shows the per acre value of all parcels that have acreage greater than zero.

7. **GO TOP / GO BOTT:** Go Top positions the record pointer on the first record in the table. If the table has an ascending index in use, the first record is the record with the lowest key value. If the index is in descending order, the first record is the record with the highest key value. Go Bott positions the record pointer on the last record in the table. If the table has an ascending index in use, the last record is the record with the highest key value. If the index is in descending order, the last record is the record with the lowest key value.

   Syntax

   GO TOP | BOTTOM

   Examples:

   a. Use Owner
      Go Bott

   b. Use Realprop
      Index on Parcel_no to xx
      Go Bott
      Go Top

8. **SET ORDER TO:** The Set Order To command designates a controlling order for a table.

   Syntax

   SET ORDER TO *OrderName* [ASCENDING | DESCENDING]]

   OrderName Specifies an order as the controlling index.

   ASCENDING | DESCENDING Displays and allows access to table records in ascending or descending order. Including ASCENDING or DESCENDING doesn't change the index file or tag in any way.

   Remarks

   A database/table must be opened with the **USE** command before the **SET ORDER TO** command can be issued. A database/table can have many orders open simultaneously. However, only one order name determines the order in which the records in a table are displayed or accessed. SET ORDER lets you designate the controlling order. The order must be created by the WinGAP indexing procedure. Refer to the WinGAP Files & Orders table for a list of available orders. Certain commands (SEEK, for example) use the controlling order to search for records.

   If a SET ORDER command is issued, you are not placed at the top or bottom of the order. The current record position is maintained. To access the top of the order, you must issue the command: **GO TOP** To go to the last record in the order, issue the command: **GO BOTT**

   Examples:

   a. USE REALPROP
      SET ORDER TO PARCEL_NO – opens the realprop table and puts the records in parcel number order
   b. USE OWNER
      SET ORDER TO NAME – opens owner with records in alpha order

9. **INDEX ON:** Creates a file with an IDX extension that contains a specified order for the records. A database/table must be opened with the **USE** command before the **INDEX ON** command can be issued. If the IDX exists and SET SAFETY is ON, Visual FoxPro asks if you would like to overwrite the existing IDX. If SET SAFETY is OFF, you aren't prompted, and the output IDX is overwritten.

   Syntax

   INDEX ON eExpression TO IDXFileName [UNIQUE]

   Arguments

   eExpression Specifies an index expression that can include the name of a field or fields from the current table. The index expression can also include calculated expressions. If multiple fields are used in the expression, the fields must be of the same field type.

   FOR lExpression Specifies a condition whereby only records that satisfy the filter expression lExpression are available for display and access; index keys are created in the index file for just those records matching the filter expression.

   TO IDXFileName Creates an .IDX index file. The name should not include spaces or any invalid characters such as slashes (back or forward).

   UNIQUE Specifies that only the first record encountered with a particular index key value is included in an .IDX file. Using the UNIQUE option of INDEX is identical to executing SET UNIQUE ON before issuing INDEX or REINDEX.

   Examples:

   a. USE PERSONAL
   INDEX ON CURR_VAL TO XX – opens the personal table and puts the records in ascending current value order creating an index file named xx.idx
   b. USE REALPROP
   INDEX ON DIGCLASS + DIGSTRAT TO XX – opens realprop and creates xx.idx with records in digest class and strata order
   c. USE REPROP
   INDEX ON TIMP_VAL / HEATEDAREA TO XX – opens reprop and creates xx.idx with residential improvement records in dollars per square foot order

10. **DELETE:** DELETE flags a record in the database for deletion. If the DELETE command is issued when the record pointer is on a particular record, then the record is flagged for deletion. Any record(s) in the file can be flagged by using a record number or setting conditions. Deleted records have a '*' to the right of the record number when displaying or listing on the screen or when printing on reports. A ■ symbol to the left of the record when the BROWSE command is issued also indicates the record is flagged for deletion. Clicking in the rectangular area to the left of the record will insert or remove the delete flag. A record can also be deleted by pressing Ctrl + T when the record is selected.

    Syntax

    DELETE [Scope] [FOR lExpression1]

    Scope Specifies a range of records to mark for deletion. The scope clauses are: ALL, NEXT nRecords, RECORD nRecordNumber, and REST.

Scope clause	Effect
ALL	Command affects all records in the table.
RECORD nNumber	Command affects only the specified record number. The following example acts on record five. DELETE RECORD 5

FOR lExpression1 Specifies a condition whereby only the records that satisfy the logical condition lExpression1 are marked for deletion.

Examples

a. USE INVN
   DELETE - flags inventory record that pointer is on for deletion
b. USE INVN
   DELETE RECORD 1056 - flags record number 1056 for deletion
c. USE OWNER
   DELETE FOR LASTNAME = 'SMITH' - flags all records with last name "SMITH" for deletion
d. USE MOBILE
   DELETE ALL - deletes all records in database

11. **RECALL:** Unmarks records that are flagged for deletion. Ctrl + T can also be used to unmark a deleted record if the record is selected.

Syntax

RECALL [Scope] [FOR lExpression1]

Scope Specifies a range of records to mark for deletion. The scope clauses are: ALL, NEXT nRecords, RECORD nRecordNumber, and REST.

Scope clause	Effect
ALL	Command recalls all records in the table.
RECORD nNumber	Command affects only the specified record number. The following example acts on record five. RECALL RECORD 5

FOR lExpression1 Specifies a condition whereby only the records that satisfy the logical condition lExpression1 are recalled.

Examples

a. USE INVN
   RECALL - recalls record that pointer is on
b. USE INVN
   RECALL RECORD 1056 - flags record number 1056
c. USE OWNER
   RECALL FOR LASTNAME = 'SMITH' - recalls all records marked for deletion with a last name "SMITH"
d. USE MOBILE
   RECALL ALL - recalls all deleted records in database

12. **REPLACE:** The REPLACE command allows the user to perform mass updates on records. Before performing mass updates, the user should ensure that a reliable backup of the data has been made.

Syntax

REPLACE FieldName1 WITH eExpression1 [ADDITIVE] [, FieldName2 WITH eExpression2 [ADDITIVE]] ... [Scope] [FOR lExpression1]

Arguments

FieldName1 WITH eExpression1 [, FieldName2 WITH eExpression2 ...] Specifies that the data in FieldName1 be replaced with the value of the expression eExpression1; that the data in FieldName2 be replaced with the value of the expression eExpression2; and so on.

ADDITIVE Appends to the end of the memo fields replacements to memo fields. ADDITIVE applies to replacements in memo fields only. If you omit ADDITIVE, the memo field is overwritten with the value of the expression.

Scope Specifies a range of records to replace. Only the records that fall within the range are replaced. The scope clauses are: ALL, and RECORD nRecordNumber.
The default scope for REPLACE is the current record.

FOR lExpression1 Specifies that the designated fields be replaced only in records for which lExpression1 evaluates to true (.T.). Including FOR lets you conditionally replace records, filtering out those you don't want replaced.

Examples

a. USE OWNER
   REPLACE ZIP WITH '30664' FOR CITY = 'XYZ'
b. USE PERSONAL
   REPLACE ALL CURR_VAL WITH INVN_VAL + MEFF_VAL + BOAT_VAL + PLANE_VAL + OTHER_VAL
c. USE REALPROP
   REPLACE COMMENT1 ADDITIVE WITH 'COA NOTICE SENT 04/01/2007' FOR VAL_CHG

13. **SUM:** The SUM command provides the user with the ability to determine the total of a numeric field(s). The command can be conditioned or scoped as with DELETE and RECALL.

Syntax

SUM [eExpressionList] [Scope] [FOR lExpression1] [TO MemVarNameList]

eExpressionList Specifies one or more fields or field expressions to total. Fields are separated by commas. If you omit the field expression list, all numeric fields are totaled.

Scope Specifies a range of records to include in the total. The scope clauses are: ALL, and RECORD nRecordNumber.

The default scope for SUM is ALL records.

FOR lExpression1 Specifies that only the records for which the logical condition lExpression1 evaluates to true (.T.) are included in the total. Including FOR lets you conditionally total records, filtering out undesired records.

TO MemVarNameList Stores each total to a variable. If you specify a variable in MemVarNameList that doesn't exist, Visual FoxPro automatically creates it. Separate the variable names in the list with commas. Variable values can be displayed after the SUM command is issued by preceding the variable name with a ?

Examples

a. USE REALPROP
   SUM TOTALACRES,CURR_VAL FOR DIGCLASS = 'V'
b. USE BOAT
   SUM BOAT_VALUE TO BV
   ?BV (displays the total value of boats)

14. **AVERAGE:** The AVERAGE command provides the user with the ability to determine the average of a numeric field(s). The command can be conditioned or scoped as with DELETE and RECALL.

Syntax

AVERAGE [eExpressionList] [Scope] [FOR lExpression1] [TO MemVarNameList]

eExpressionList Specifies one or more fields or field expressions to average. Fields are separated by commas. If you omit the field expression list, all numeric fields are averaged.

Scope Specifies a range of records to include in the total. The scope clauses are: ALL, RECORD nRecordNumber.

The default scope for AVERAGE is ALL records.

FOR lExpression1 Specifies that only the records for which the logical condition lExpression1 evaluates to true (.T.) are included in the average. Including FOR lets you conditionally average records, filtering out undesired records.

TO MemVarNameList Stores each average to a variable. If you specify a variable in MemVarNameList that doesn't exist, Visual FoxPro automatically creates it. Separate the variable names in the list with commas. Variable values can be displayed after the AVERAGE command is issued by preceding the variable name with a ?

Examples

a. USE REALPROP
   AVERAGE TOTALACRES,CURR_VAL FOR DIGCLASS = 'V'
b. USE BOAT
   AVERAGE BOAT_VALUE TO BV
   ?BV (displays the average value of boats)

15. **COUNT:** The COUNT command is used to determine how many records meet a specified set of criteria. The COUNT command must be followed by a condition.

Syntax

Count [FOR lExpression1] [TO MemVarNameList]

FOR lExpression1 Specifies that only the records that satisfy the logical condition lExpression1 are counted. Including FOR lets you conditionally count records, filtering out undesired records.

TO VarName Specifies the variable the record count is stored. If the variable you specify doesn't exist, Visual FoxPro creates it. Variable values can be displayed after the COUNT command is issued by preceding the variable name with a ?.

Examples

a. USE REALPROP
   COUNT FOR DIGCLASS = 'V'
b. USE BOAT
   COUNT FOR BOAT_VALUE > 0 TO BV
   ?BV (displays the number of boat record with a value greater than 0)

16. **TOTAL:** The Total command computes totals for numeric fields in the currently selected table and creates another table of the users naming containing the totals.

Syntax

TOTAL ON *FieldName* [FIELDS *FieldNameList*] [FOR *lExpression1*] [TO TableName]

Arguments

FieldName

Specifies the field on which the totals are grouped. The table must be sorted/indexed on this field, or an open order must have this field as its key expression.

FIELDS *FieldNameList*

Specifies the fields to be totaled. Separate the field names in the list with commas. If you omit the FIELDS clause, all numeric fields are totaled by default.

FOR lExpression1 Specifies that only the records that satisfy the logical condition lExpression1 are counted. Including FOR lets you conditionally count records, filtering out undesired records.

TableName

Specifies the name of the table that will contain the totals. If the specified table doesn't exist, Visual FoxPro creates it. If the table exists and SET SAFETY is ON, Visual FoxPro asks if you would like to overwrite the existing table. If SET SAFETY is OFF, you aren't prompted, and the output table is overwritten.

Remarks

The table in the currently selected work area must be sorted or indexed. A separate total is calculated for each set of records with a common field value or unique index key value. The results are placed into records in a second table. One record is created in the second table for each common field value or unique index key value.

Numeric overflow can occur if the numeric fields in the second table aren't wide enough to contain the totals. Visual FoxPro conserves the most significant portions of the totals when numeric overflow occurs. When a field is too small to accept a total, decimal places are truncated, and the remaining decimal portion of the total is rounded.

If the total still doesn't fit, scientific notation is used if the total field contains seven or more digits.

Finally, asterisks replace the field contents.

Examples

a. USE PERSONAL
SET ORDER TO OWNKEY
TOTAL ON OWNKEY FIELD CURR_VAL TO TEMP – opens personal and creates a table named temp which contains the total current value for each unique ownkey found in personal

b. USE REALPROP
INDEX ON DIGCLASS + DIGSTRAT TO XX
TOTAL ON DIGCLASS + DIGTRAT FIELD TOTALACRES TO TEMP– opens realprop and creates xx.idx with records in digest class and strata order and creates a table named temp containing the total acreage for each unique digest class/strata combination.

17. **COPY TO:** Creates a new file from the contents of the currently selected table.

Syntax

COPY TO FileName [FIELDS FieldList] [Scope] [FOR lExpression1] [[TYPE] [FOXPLUS | FOX2X | SDF | XLS | DELIMITED [WITH Delimiter | WITH BLANK | WITH TAB]

Arguments:

FileName Specifies the name of the new file COPY TO creates. If you do not include an extension with the file name, the default extension for the specified file type is assigned. If you do not specify a file type, COPY TO creates a new Visual FoxPro table and assigns the table file name the default extension .DBF.

FIELDS FieldList Specifies which fields are copied to the new file. If you omit FIELDS FieldList, all fields are copied to the file. If the file you are creating is not a database table, memo fields are not copied to the new file, even if memo field names are included in the field list.

Scope Specifies a range of records to copy to a file. Only the records within the range are copied. The scope clauses are: ALL and RECORD nRecordNumber.

FOR lExpression1 Specifies that only the records for which the logical condition lExpression1 evaluates to true (.T.) are copied to the file. Include FOR lExpression1 to conditionally copy records, filtering out undesired records.

TYPE Specifies the file type if the file you create isn't a Visual FoxPro table. Although you must specify a file type, you need not include the TYPE keyword.

FOXPLUS Visual FoxPro memo files have a different structure than FoxBASE+™ memo files. If your source Visual FoxPro table contains a memo field, include the FOXPLUS clause to create a table that can be used in FoxBASE+. The Visual FoxPro memo field cannot contain binary data because FoxBASE+ does not support binary data in memo fields.

FOX2X Creates a new table that can be opened in earlier versions of FoxPro (versions 2.0, 2.5, and 2.6).

SDF Creates an SDF (System Data Format) file. An SDF file is an ASCII text file in which records have a fixed length and end with a carriage return and linefeed. Fields are not delimited. The SDF file name is assigned a .TXT file extension if you do not include an extension.

XLS Creates a Microsoft Excel version 2.0 worksheet file. Each field from the currently selected table becomes a column in the spreadsheet and each record becomes a row. An .XLS extension is assigned to the new worksheet if you do not include a file extension. The maximum number of records that can be copied to an XLS file is 16,383.

XL5 Creates a Microsoft Excel version 5.0 worksheet file. Each field from the currently selected table becomes a column in the spreadsheet and each record becomes a row. An .XLS extension is assigned to the new worksheet if you do not include a file extension. The maximum number of records that can be copied to an XLS file is 16,383.

NOTE: More recent versions of Excel, such as Version 8, have a record limit of 65,536.

DELIMITED Creates a delimited file, also known as a comma separated values file. A delimited file is an ASCII text file in which each record ends with a carriage return and linefeed. The default field separator is a comma. Since character data may include commas, character fields are additionally delimited with quotation marks. Unless you specify otherwise, a .TXT extension is assigned to all newly created DELIMITED files.

DELIMITED WITH Delimiter Creates a delimited file with character fields delimited by a character other than a quotation mark. The character that delimits character fields is specified with Delimiter.

DELIMITED WITH BLANK Creates a delimited file with fields separated by spaces instead of commas.

DELIMITED WITH TAB Creates a delimited file with fields separated by tabs instead of commas.

DELIMITED WITH CHARACTER Delimiter Creates a delimited file with all fields delimited by the character specified with Delimiter. If Delimiter is a semicolon (the character used in Visual FoxPro to indicate command line continuation), enclose the semicolon in quotation marks. You can also specify the BLANK and TAB keywords for Delimiter.

Note that the WITH Delimiter clause can be combined with the WITH CHARACTER clause. For example, the following command creates a text file with character fields delimited with underscores and all fields delimited with semicolons:

COPY TO mytxt.txt DELIMITED WITH _ WITH CHARACTER ';'

Examples

a. USE BOAT
COPY TO BOAT SDF – opens boat and creates a text file named boat.txt containing all of the records in the boat table

b. USE Boat
COPY TO BOAT_EXCEL TYPE FOX2X – opens boat and creates a Fox 2x file which you can open in Excel and keep up 16,383, or 65,536, or over 1 million records, depending on the version of Excel. If you add the extension XLS to the file name, you can double click the file, open it in Excel, and preserve the maximum number of records for that version.
Example: COPY TO BOAT_EXCEL.XLS TYPE FOX2X

c. USE SALEINFO (file has 25,000 records)
COPY TO SALES1 XLS FOR RECNO() <=16000 – opens saleinfo and creates an Excel 2.0 file named sales1.xls containing the first 16,000 sales records
COPY TO SALES2 XLS FOR RECNO() > 16000 – opens saleinfo and creates an Excel 2.0 file named sales2.xls containing sales records with a record number greater than 16,000

d. USE WGSKETCH
COPY TO TEMP FOX2 – opens wgsketch and creates a foxpro file named temp containing all of the records in the wgsketch table
RENAME TEMP.DBF TO WGSKETCH.XLS - keeps all records less than 65,000

18. **APPEND:** The Append command adds one or more new records to the end of a table.

Syntax

APPEND [BLANK]

Arguments

BLANK

Adds one blank record to the end of the current table. Visual FoxPro does not open an editing window when you issue APPEND BLANK.
You can edit the new record with BROWSE, CHANGE, or EDIT.

Remarks

When you issue APPEND or APPEND BLANK and a table isn't open in the currently selected work area, the Open dialog appears so that you can choose a table to which you can append records.

APPEND opens an editing window so you can enter data into one or more new records. When you add a new record, Visual FoxPro updates any indexes that are open.

Examples

a. USE TAXDIST
APPEND – opens taxdist, adds a record to the table and opens an edit window for data entry

19. **MODI COMM:** The Modi Comm (Modify Command) command opens an editing window so you can modify or create a program file.

Syntax

MODIFY COMMAND [*FileName*]

Arguments

FileName
Specifies the file name for the program to open or create. If you don't specify an extension for a new program file, Visual FoxPro automatically assigns a .prg extension.
Remarks

When modifications are made to a program file, the updated file is written to disk. In Visual FoxPro, a backup file with a .BAK extension is created if you select the Make Backup Copy check box on the Edit Properties dialog box, which appears when you choose Properties from the Edit menu.

Examples

- **a.** MODI COMM DATA_EDITS – opens the data_edits.prg file for editing
- **b.** MODI COMM ..\..\WINGAP.INI – opens the wingap.ini file for viewing and/or editing from within an appraisal year

20. **MODI STRUC:** The Modi Struc command displays the Table Designer, which allows the user to view and/or modify the structure of a table.

Syntax

MODIFY STRUCTURE

Remarks

MODIFY STRUCTURE opens the Table Designer dialog box. If a table isn't open in the currently selected work area, the Open dialog box is displayed, allowing you to choose a table to modify. Changes you can make to a table's structure include adding and deleting fields; modifying field names, sizes, and data types; adding, deleting, or modifying index tags; and specifying null value support for fields.

Caution Changing a field from one data type to another may not transfer the contents of the field correctly, or at all. For example, if you convert a field of date type to a numeric type, the field contents do not transfer.

FoxPro automatically makes a backup copy of the current table before you change the table's structure. When the modifications are complete, the data contained in the backup copy of the table is appended to the newly modified table structure. If the table has a memo field, a memo backup file is also created. The table backup file has a .bak extension, and the memo backup file has a .tbk extension.

If you accept the structure changes and then interrupt the data-copying process, the new file will not contain all the records in the original table.

Remember that FoxPro creates a .bak file for the original table file and, if the table has a memo field, a .tbk copy of the original memo file. If you have any problems with MODIFY STRUCTURE, you can delete the new file or files and rename the .bak file and .tbk file, if any, to the original file extensions (.dbf and .fpt).

When you modify the structure of a table that has a memo field, the blocksize of the memo file is set to the current blocksize setting. You can specify the memo file blocksize with SET BLOCKSIZE.

21. **SEEK:** The Seek command searches a table for the first occurrence of a record whose index key matches a general expression, then moves the record pointer to the matching record.

Syntax

SEEK *eExpression*

Arguments

eExpression

Specifies the index key for which SEEK searches. *eExpression* can be null.

Remarks

You can use SEEK only with indexed tables, and you can search only on the index key. The match must be exact unless SET EXACT is set to OFF.

If SEEK finds a record with a matching index key, RECNO( ) returns the record number of the matching record, FOUND( ) returns true (.T.), and EOF( ) returns false (.F.).

If a matching key isn't found, RECNO( ) returns the number of records in the table plus 1, FOUND( ) returns false (.F.), and EOF( ) returns true (.T.).

If SET NEAR is on, the record pointer is positioned immediately after the record with the closest index key. If SET NEAR is off, the record pointer is positioned at the end of the file. In either case, RECNO() returns the record number of the closest record.

Examples

a. USE BOAT
SET ORDER TO PERSKEY
SEEK 2501 – opens boat and its perskey order, then attempts to find a perskey equal to 2501

22. **SELECT:** The Select command activates the specified work area.

Syntax

SELECT *nWorkArea* | *cTableAlias*

Arguments

nWorkArea

Specifies a work area to activate. If *nWorkArea* is 0, the lowest-numbered unused work area is activated.

cTableAlias

Specifies a work area containing an open table to activate. *cTableAlias* is the alias of the open table. You can also include a letter from A through J for *cTableAlias* to activate one of the first ten work areas.

Remarks

By default, work area number 1 is active when you start Visual FoxPro.
Note Fields in tables open in any work area can be included in Visual FoxPro commands and functions.

Examples

a. SELECT A
USE MOBILE – opens mobile in workarea A
SELECT B
USE ACESSORY – opens accessory in workarea B with mobile still open in work area A. Acessory is the active work area.
SELECT A or SELECT MOBILE – sets mobile as the active work area

23. **SET RELATION TO:** The Set Relation command establishes a relationship between two open tables.

Syntax

SET RELATION TO [*eExpression1* INTO *nWorkArea1* | *cTableAlias1*
[, *eExpression2* INTO *nWorkArea2* | *cTableAlias2* ...]]

Arguments

eExpression1

Specifies the relational expression that establishes a relationship between the parent and child tables. The relational expression is usually the index expression of the controlling index of the child table.

The index for the parent table can be a single-entry (.idx) index or a multiple-entry structural compound (.cdx) index. If the index is compound, SET ORDER can be used to specify the order name for the parent table.

For example, consider the owner and realprop tables. Suppose the parent owner table has been indexed and ordered on the ownkey number with this command:

SET ORDER TO OWNKEY

To relate the owner and realprop tables on the ownkey number,

- select the work area containing the owner parent table
- set owner to the proper order with SET ORDER TO OWNKEY
- select the work area containing the realprop child table
- issue SET RELATION, specifying the index expression with the following relational expression:

SET RELATION TO ownkey INTO owner

The child table must be indexed. Visual FoxPro displays an error message if you issue SET RELATION and the child table isn't ordered with an index.

INTO *nWorkArea1* | *cTableAlias1*
Specifies the work area number (*nWorkArea1*) or table alias (*cTableAlias1*) of the child table.

eExpression2 INTO *nWorkArea2* | *cTableAlias2* ...

Specifies a relational expression (*eExpression2*) and a child table or tables to establish an additional relationship between the parent table and child tables. From a single SET RELATION command, you can create multiple relations between a single parent table and various child tables. Precede each relation by a comma.

nWorkArea2

specifies a work area number and *cTableAlias2* specifies a table alias for the child table.

SET RELATION relates these owner and realprop tables on their common field — the ownkey number field. To set the relation, the parent table must be indexed on the common field. After you set the relation, whenever you move the record pointer to a record with a given ownkey in the child realprop table, the record pointer in the parent owner table moves to the record with the same ownkey number. If a matching record can't be found in the owner table, the record pointer in the owner table is positioned at the end of the table.

Issue SET RELATION TO with no arguments to remove all relationships in the currently selected work area. SET RELATION OFF can be used to remove a specific parent-child relationship.

Examples

a. SELECT A
USE MOBILE – opens mobile in workarea A
INDEX ON MOBILEKEY TO XX
SELECT B
USE ACESSORY – opens accessory in workarea B with mobile still open in work area A. Acessory is the active work area.
SET RELATION TO MOBILEKEY INTO A – relates the records in the child acessory table to the parent record in mobile

b. SELECT A
USE OWNER
SET ORDER TO OWNKEY
SELECT B
USE REALPROP
SET RELATION TO OWNKEY INTO A
INDEX ON A.LASTNAME + A.FIRSTNAME + A.MIDDLE TO XX
TOTAL ON A.LASTNAME + A.FIRSTNAME + A.MIDDLE FIELD CURR_VAL TO OWNER_TOTALS

24. **SET SKIP TO:** The Set Skip To command creates a one-to-many relationship among tables.

Syntax

SET SKIP TO [*TableAlias1* [, *TableAlias2*] ...]

Arguments

TO *TableAlias1* [, *TableAlias2*] ...
Specifies the aliases of multiple child tables. These are used to create a one-to-many relationship with a parent table. Use commas to separate the aliases. In commands that support a scope (DISPLAY, LIST, and so on), records in the parent table are repeated for each corresponding record in the child table.

Use SET SKIP TO without additional arguments to remove the one-to-many relationship from the parent table open in the currently selected work area. Any one-to-one relationships remain in effect. One-to-one relationships can be removed with SET RELATION TO.

Remarks

Using SET RELATION, you can establish relations between tables open in different work areas. When the record pointer is moved in the parent table, the record pointer in the child table moves to the first corresponding record. The relational expression in SET RELATION determines where the record pointer moves in the child table. A one-to-one relation is created — for each record in the parent table, the record pointer moves to the first matching record in the child table. If a matching record can't be found in the child table, the record pointer in the child table moves to the end of the table.

Frequently, a child table contains multiple records that correspond to one record in the parent table. SET SKIP lets you establish a one-to-many relationship between one record in the parent table and multiple records in the child table. When you skip through the parent table, the record pointer remains on the same parent record until the record pointer moves through all related records in the child table.

To establish a one-to-many relationship, first create the relationship between the parent and child table with SET RELATION. Then, issue SET SKIP to create a one-to-many relationship.

Examples

a. SELECT A
USE COST – opens cost in workarea A
INDEX ON PERSKEY TO XX
SELECT B
USE PERSONAL – opens personal in workarea B with cost still open in work area A. Personal is the active work area.
SET RELATION TO PERSKEY INTO A – relates the records in the parent personal table to the child records in cost
SET SKIP TO A – sets a one to many relationship between cost and personal
BROWSE FIELDS PERSKEY,A.COSTKEY,A.VALMETHOD,TAXDISTRIC

25. **SET UNIQUE ON:** The Set Unique On command specifies whether records with duplicate index key values are maintained in an index file.

Syntax

SET UNIQUE ON | OFF

Arguments

ON

Specifies that any record with a duplicate index key value not be included in the index file. Only the first record with the original index key value is included in the index file.
OFF

(Default) Specifies that records with duplicate index key values be included in the index file.

Remarks

An index file retains its SET UNIQUE setting when you issue REINDEX.

SET UNIQUE is scoped to the current data session.

Examples

a. SET UNIQUE ON
USE MOBILE
INDEX ON MOBILEKEY TO XX – if the number of records indexed equals the number of records in mobile, the user is assured of having no duplicated mobilekeys
SET UNIQUE OFF

WinGAP Database Management

Functions

Functions are variants of commands that provide enhanced functionality in the management of databases. Functions are always followed by () with some expression, value or field usually contained within the parenthesis. Functions always return a value after the data within the parenthesis is evaluated.

1. **ABS():**

    a. Purpose - To calculate the absolute value of a number

    b. Syntax - Abs(<nNumber>) nAbsValue

    c. Argument - <nNumber> is the number to determine the absolute value of

    d. Returns - Abs() returns the absolute value of <nNumber>.

    Example:

    a. Obtain the absolute total of the value in dispute
        i. Use appeals
        ii. Set dele on
        iii. Sum abs(vid) to nVid
        iv. ?nVid

2. **AT():**

    a. Purpose - To determine the position of a string within another string

    b. Syntax - At(<cSearchFor>, <cSearchIn>) nLocation

    c. Argument - <cSearchFor> is the character string to search for <cSearchIn> is the character string to search

    d. Returns - At() returns a numeric indicating the location of <cSearchFor> within <cSearchIn>. If <cSearchFor> is not found, At() returns 0.

    Example:

    a. Find all parcels with a notation in comments that there is a locked gate on the property
        i. Use realprop
        ii. Set dele on
        iii. Brow field parcel_no for at('locked gate',lower(comment1)) > 0

3. CTOD():

a. Purpose - To convert a character value to a date

b. Syntax - CTOD(<cDate>) dDate

c. Argument - <cDate> is a character string consisting of numbers representing month, day, and year digits separated by the "/" character. <cDate> must be expressed as "mm/dd/yy" or "mm/dd/yyyy".

d. Returns - CTOD() returns the date equivalent of <cDate>.

Example:

a. Replace reviewdate with 10/01/2007 for all parcels on map 001
   i. Use realprop
   ii. Replace reviewdate with ctod('10/01/2007') for parcel_no = '001'

4. DATE():

a. Purpose - Returns the current system date.

b. Syntax - DATE()

Example:

a. Replace reviewdate with today's date for all parcels on map 001
   i. Use realprop
   ii. Replace reviewdate with date() for parcel_no = '001'

5. DTOC():

a. Purpose - To convert a date value to a character string

b. Syntax - DTOC(<dDate>) cDate

c. Argument - <dDate> is the date value to convert

d. Returns - DTOC returns a character string in the format "mm/dd/yy" that represents <dDate>.

Example:

a. Replace comments with the phrase "Review Date" and the date of review
   i. Use realprop
   ii. Replace comment1 with "Review Date: " + dtoc(reviewdate) additive

6. DTOS():

a. Purpose - To convert a date value to a character string

b. Syntax - DTOS(<dDate>) cDate

c. Argument - <dDate> is the date value to convert

d. Returns - DTOS returns a character string in the format "yyyymmdd" that represents <dDate>.

Example:

a. Replace comments with the phrase “Review Date” and the date of review for Review Dates that occurred after Jan 1, 2007
   i. Use realprop
   ii. Replace comment1 with “Review Date: “ + dtos(reviewdate) additive for dtos(reviewdate) > ‘20070101’

7. INT():

a. Purpose - INT() returns only the integer portion of a number or numeric field. No rounding takes place. It is useful in situations where values need to be truncated instead of rounded or other times when only the integer portion of a number is needed

b. Syntax - INT(*nExpression*)

c. Argument - <nExpression> specifies the numeric expression for which INT( ) returns the integer portion.

d. Returns – Numeric

Example:

a. Replace the second year value of a conservation use convenant with a value that does not exceed the 3% maximum change
   i. Use conmai
   ii. Replace val1 with int(val0) * 1.03 for val1 = 0

8. ROUND()

a. Purpose - To return a numeric value rounded to a specified number of digits.

b. Syntax - Round(<nNumber> , <nDecimals>) nRounded

c. Arguments –

   i. <nNumber> is the numeric value to round.

   ii. <nDecimals> is the number of decimal places to retain.

d. Returns - Round() returns a numeric value rounded to <nDecimals> decimals.

Example:

a. Browse the per acre value rounded to 2 decimal positions for rural land with non-overriden land values
    i. Use realprop
    ii. Browse fields parcel_no,peracre= round((a_value+p_value)/totalacres,2) for totalacres > 0 and land_type = 3

9. SPACE():

a. Purpose - To return a string of spaces

b. Syntax - Space(<nCount>) cString

c. Arguments - <nCount> is the number of spaces to return.

d. Returns - Space() returns a string of <nCount> spaces.

Example:

a. Replace all SSN's with spaces in a file called owner_temp
    i. Use owner
    ii. Copy to owner_temp
    iii. Use owner_temp
    iv. Replace all ssn with space(11),ssn1 with space(11)

10. STR():

a. Purpose - To convert a numeric expression to a character string

b. Syntax - Str(<nNumber> , <nLength> , <nDecimals>) cNumber

c. Arguments –

    i. <nNumber> is the numeric value to convert

    ii. <nLength> is the length of string to return including decimals and decimal point

    iii. <nDecimals> number of decimals to return

d. Returns - Str() returns <nNumber> formatted as a character string.

Example:

a. Replace county id number in personal with the owner key
    i. Use personal
    ii. Replace all co_id_num with str(ownkey,10,0)

11. SUBSTR():

a. Purpose - To extract a substring from a character string

b. Syntax - SubStr(<cString> , <nStart> , <nCount>) cSubString

c. Arguments -

i. <cString> is the character string in which to extract a substring

ii. <nStart> is the starting position in <cString>

iii. <nCount> is the number of characters to extract

d. Returns - SubStr() returns a substring of <cString>.

Example:

a. Determine the number of zip codes that have a zip+4 code
   i. Use owner
   ii. Count for substr(zip,6,4) > space(4) to cnt
   iii. ?cnt

12. VAL():

a. Purpose - To convert a character number to numeric type

b. Syntax - Val(<cNumber>) nNumber

c. Arguments - <cNumber> is the character string to convert.

d. Returns - Val() returns <cNumber> converted to a numeric value including decimal digits.

Example:

a. Determine the number of personal property accounts that have a county id number greater than 999,999
   i. Use personal
   ii. Count for val(co_id_num) > 999999 to cnt
   iii. ?cnt

13. YEAR():

a. Purpose - To retrieve the year from a date

b. Syntax - Year(<dDate>) nYear

c. Arguments - <dDate> is the date to determine the year from

d. Returns - Year() returns the year of the specified date.

Example:

a. Determine the number of sales that took place in 2003
   i. Use saleinfo
   ii. Count for year(saledate) = 2003 to cnt
   iii. ?cnt

14. MONTH():

a. Purpose - To convert a date value to a month number

b. Syntax - Month(<dDate>) nMonth

c. Arguments - <dDate> is the date to convert.

d. Returns - Month() returns a numeric value in the range of 1 to 12 representing the month of <dDate>.

Example:

a. Determine the number of sales that took place in 2003 within the month of January
   i. Use saleinfo
   ii. Count for year(saledate) = 2003 and month(saledate) = 1 to cnt
   iii. ?cnt

15. DAY():

a. Purpose - To calculate the day of the month as a numeric value.

b. Syntax - Day(<dDate>) nDay

c. Argument - <dDate> is the date to convert.

d. Returns - Day() returns a number in the range of 1 to 31 as a numeric value.

Example:

a. Determine the number of sales that took place on the 15th day of any month in 2003
   i. Use saleinfo
   ii. Count for year(saledate) = 2003 and day(saledate) = 15 to cnt
   iii. ?cnt

16. UPPER():

a. Purpose - To convert lower case characters to upper case

b. Syntax - Upper(<cString>) cUpperString

c. Arguments -<cString> is the character string to convert

d. Returns - Upper() returns a copy of <cString> with all alphabetic characters converted to uppercase.

Example:

a. Determine the number of owners whose last name begins with “SMITH”
   i. Use owner
   ii. Count for upper(lastname) = ‘SMITH’ to cnt
   iii. ?cnt

17. LOWER():

a. Purpose - To convert upper case characters to lower case

b. Syntax - Lower(<cString>) cLowerString

c. Arguments -<cString> is the character string to convert

d. Returns - Lower() returns a copy of <cString> with all alphabetic characters converted to lowercase.

Example:

a. Determine the number of owners whose last name begins with “smith”
   i. Use owner
   ii. Count for lower(lastname) = ‘smith’ to cnt
   iii. ?cnt

18. IIF():

a. Purpose - To return the result of an expression based on a condition

b. Syntax - iif(<lCondition> , <expTrue> , <expFalse>) xValue

c. Arguments –

i. <lCondition> is a logical expression to be evaluated.

ii. <expTrue> is the value, of any data type, returned if <lCondition> is true.

iii. <expFalse> is the value, of any data type, returned if <lCondition> is false.

d. Returns - iif() returns the evaluation of <expTrue> if <lCondition> evaluates to true and <expFalse> if it evaluates to false.

Example:

a. Accumulate the total value of residential improvements by checking the override value and if it is greater than zero add the override value to a variable called nvalue. If the override value is zero, add the calculated value to nvalue.
   i. Use Reprop
   ii. Sum iif(ovr_val > 0 , ovr_val , timp_val) to nvalue

WInGAP Database Management

Memory Variables

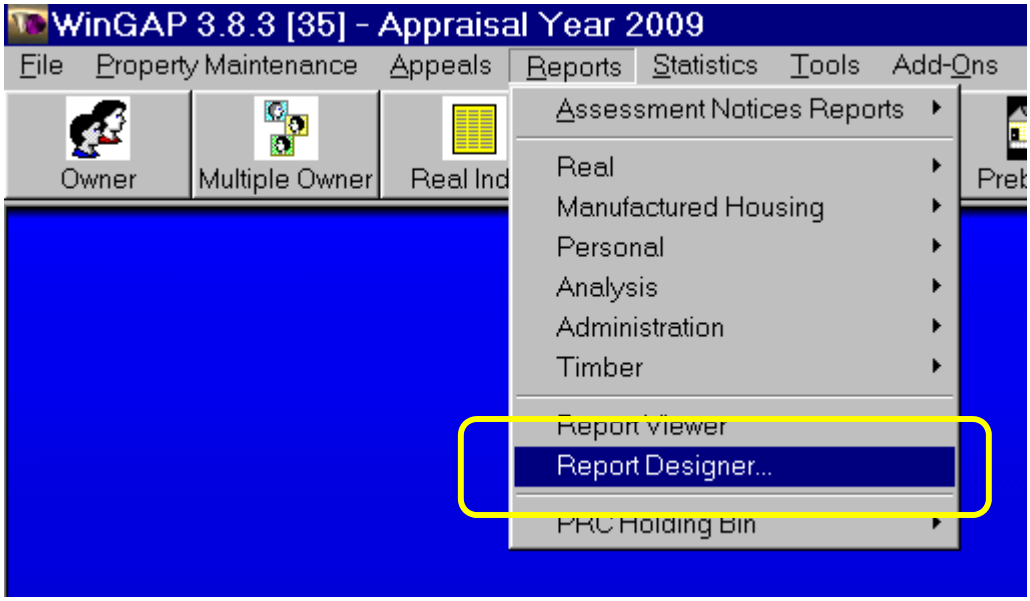
MEMORY VARIABLES are temporary storage areas. They can hold any type of data but cannot be combined unless they are of the same data type. MEMORY VARIABLES are useful when performing mathematical operations where intermediate steps require some type of holding area for values that will be used later. MEMORY VARIABLES are cleared when you exit FoxPro. The command DISPLAY MEMORY allows the user to see any variables that are present. An example in using MEMORY VARIABLES can be found below:

Find the aggregate ratio and the PRD based on sales data you have entered in sales.dbf with the fields saleprice, assessment, and ratio being present

```
USE SALES
SUM SALEPRICE TO SP
SUM ASSESSMENT TO ASMT
AVERAGE RATIO TO MEAN
AGG_RAT = ASMT/SP
PRD =  MEAN / AGG_RAT
DISP MEMO
```

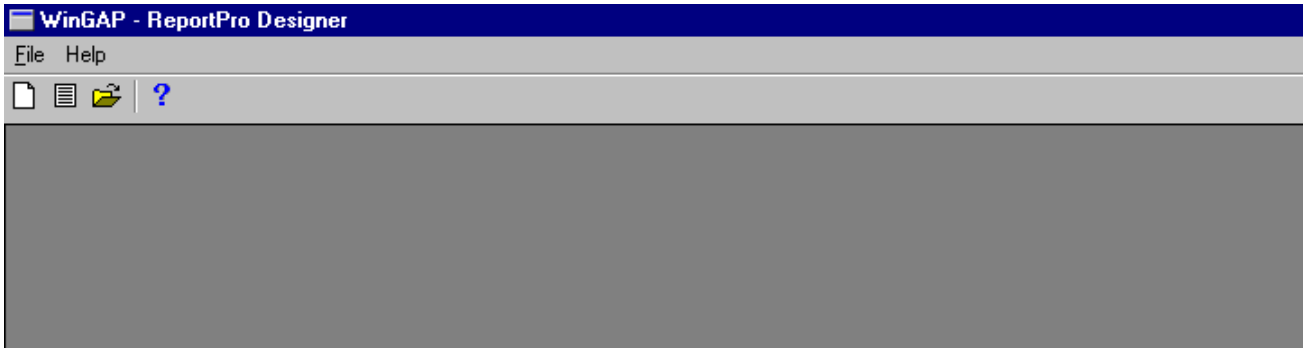
WinGAP Report Designer

The report designer included with WinGAP offers a powerful and flexible alternative to using Foxpro to generate reports. The report designer was written and developed professionally by Data Pro Inc. in Warner Robins, GA. The Report Designer is very easy to use, yet powerful. To start the Report Designer, the user should select the **Reports >> Report Designer** option as shown below.



The user can also click the Report Design button on the WinGAP Tool Bar, as shown below:

Either option produces the starting screen of the report designer, as shown below.

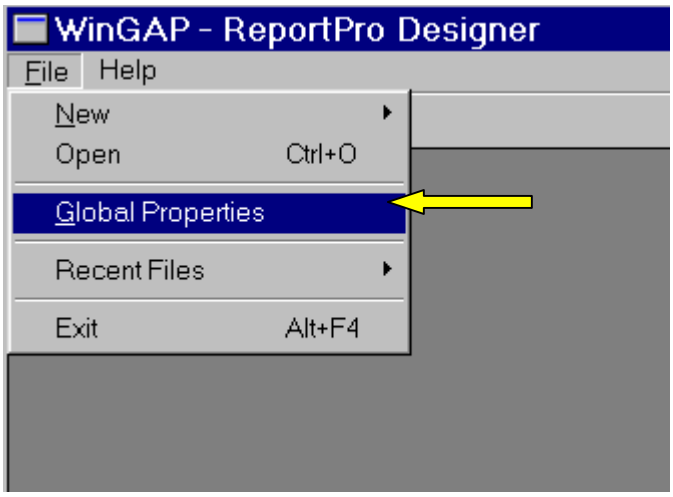


Temporary Folder

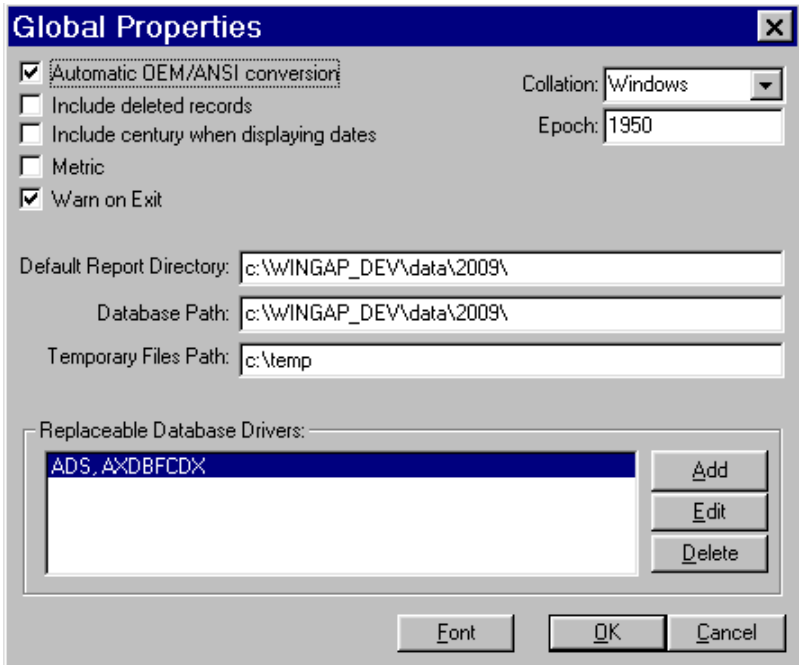
To enhance the speed of reporting, a Temp (Temporary) folder should be created within the WinGAP application folder and the path to the Temp folder entered in ReportPro's Global Properties. The Temp folder will provide ReportPro with a means of creating temporary index files on the network drive instead of creating them on the local drive. The Temp folder must be present before the path to the Temp folder can be placed in ReportPro's Global Properties.

After the Temp folder is created with Windows Explorer, the user can

- open the Report Designer
- click on **File >> Global Properties**



This will produce the Global Properties Form, as seen below



The path to the Temp folder should be keyed in the field, Temporary Files Path. An example of a path to the Temp folder, as shown on the previous page, would be C:\Temp. The user should verify that this path and folder actually exist. The WinGAP folder, the Data folder, or any Appraisal Year folder should **NEVER** be used as the location for the temporary files. Also, the Temp folder should **NEVER** be placed in the root directory of a **NETWORK** drive. The Temp folder **CAN** be placed in the root directory on a local drive, such as a single user system.

Note: The Temp folder path can also be entered by running the Report Designer, opening any report, clicking on **File >> Properties >> Global**, and entering the path in the Temporary Files Path field on the Global Properties Form.

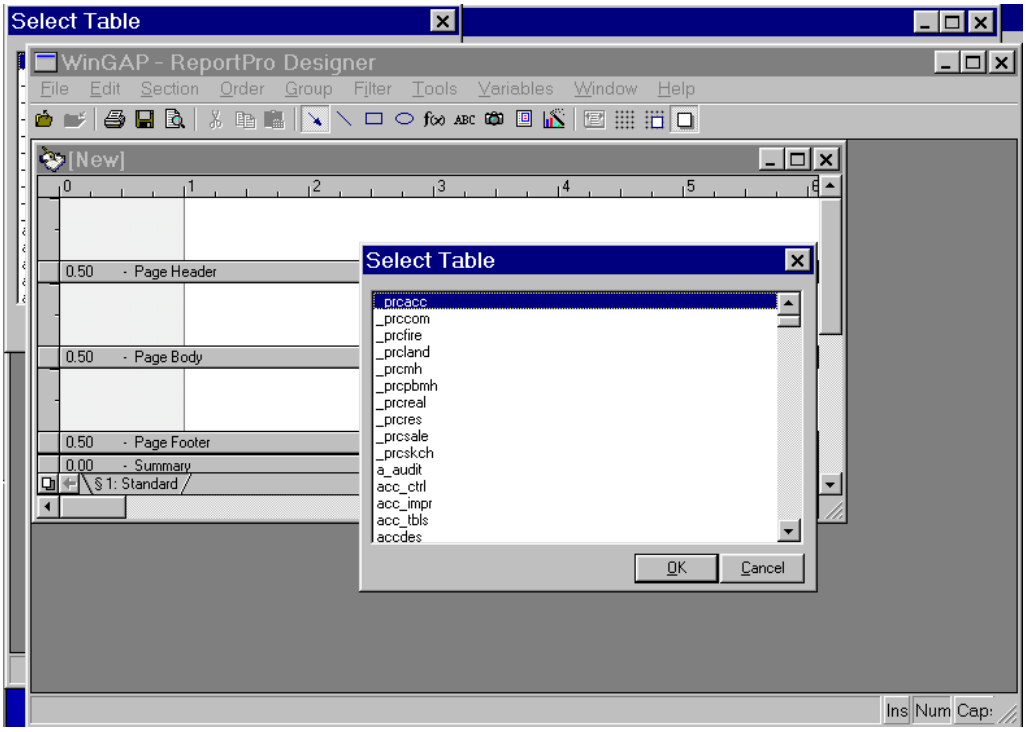
Creating New Reports

A variety of methods can be employed to create new reports using the WinGAP Report Designer. All of these methods begin with the user clicking the File Menu, then selected the New option, as shown below:

In the WinGAP Technical Workshop, the Standard Report Wizard (the fourth item on the **File >> New** submenu) is used to create all reports, and will be discussed in more detail shortly. What follows next is a brief discussion of the other options on the **File >> New** submenu: The Standard Report, Label Report, Cross-Tab Report, Label Report Wizard and the Cross-Tab Report Wizard. All of these are covered in the WinGAP Advanced Technical Workshop. Time permitting, the Label Report Wizard and Cross-Tab Report Wizard MAY be discussed in the WinGAP Technical Workshop.

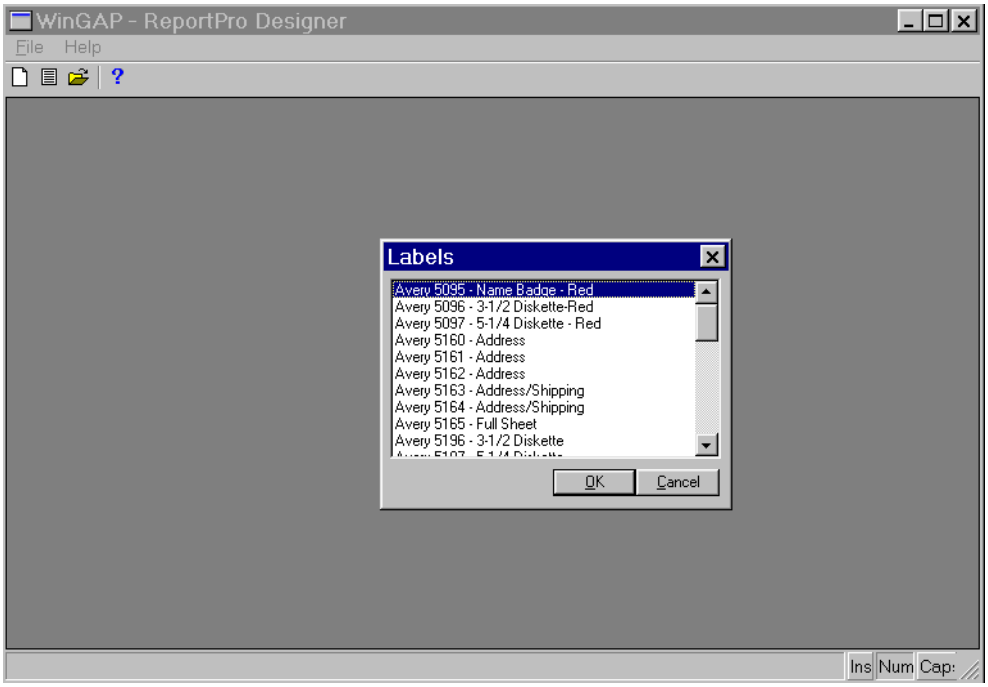
The Standard Report option

Selecting this option takes the user directly to the ReportPro Designer screen, next page, where the user selects the Table(s) to be used in the report, and then performs all of the other steps needed to create the report. This option does not employ a "Wizard" to guide the user through the report generation process, and should be used only by individuals skilled in creating reports.



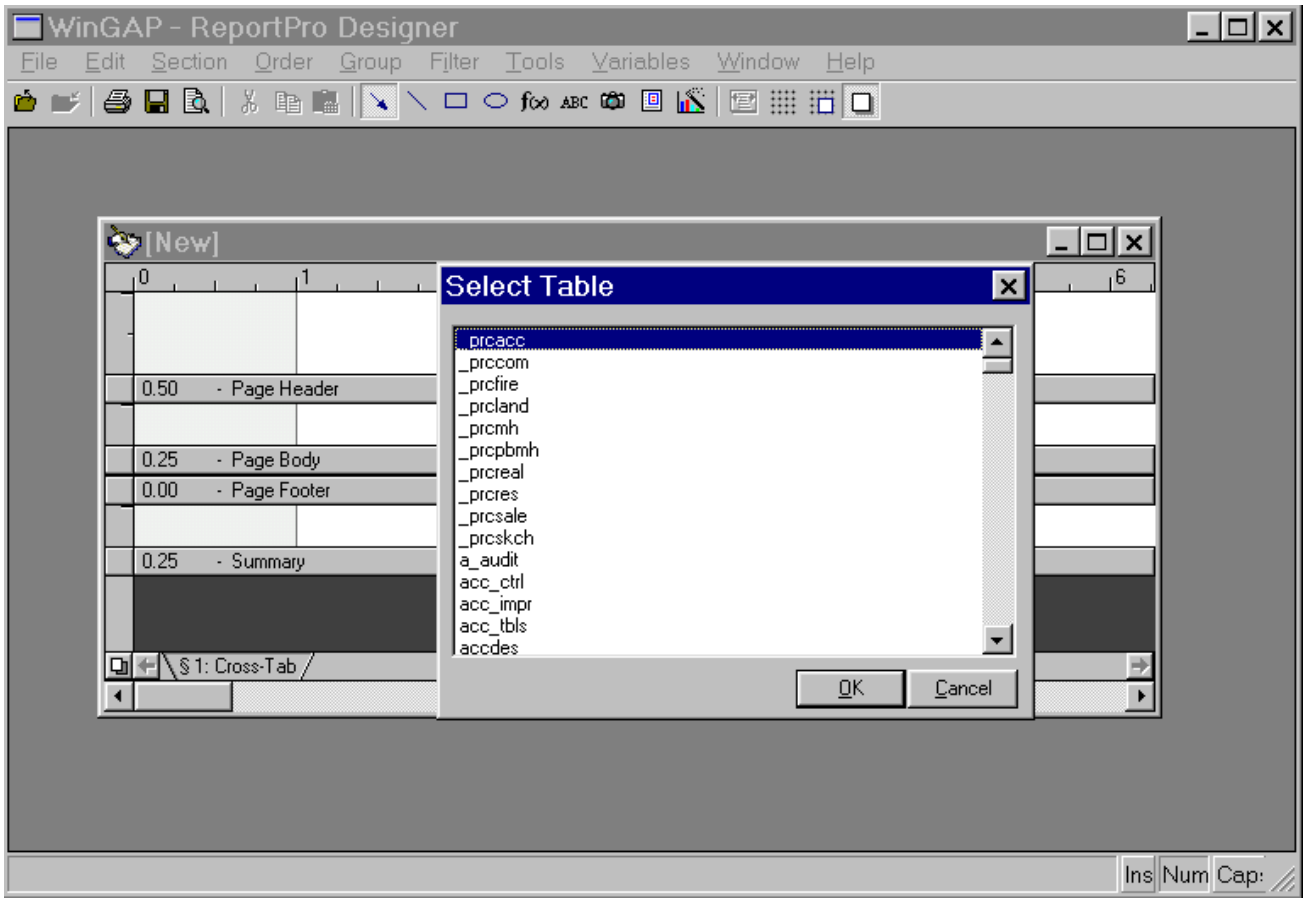
The Label Report option

Selecting this option takes the user directly to the ReportPro Designer screen for labels, as seen below, where the user selects the Label Type to be used, and then performs all of the other steps needed to create labels. This option does not employ a "Wizard" to guide the user through the label generation process, and should be used only by individuals skilled in creating labels.

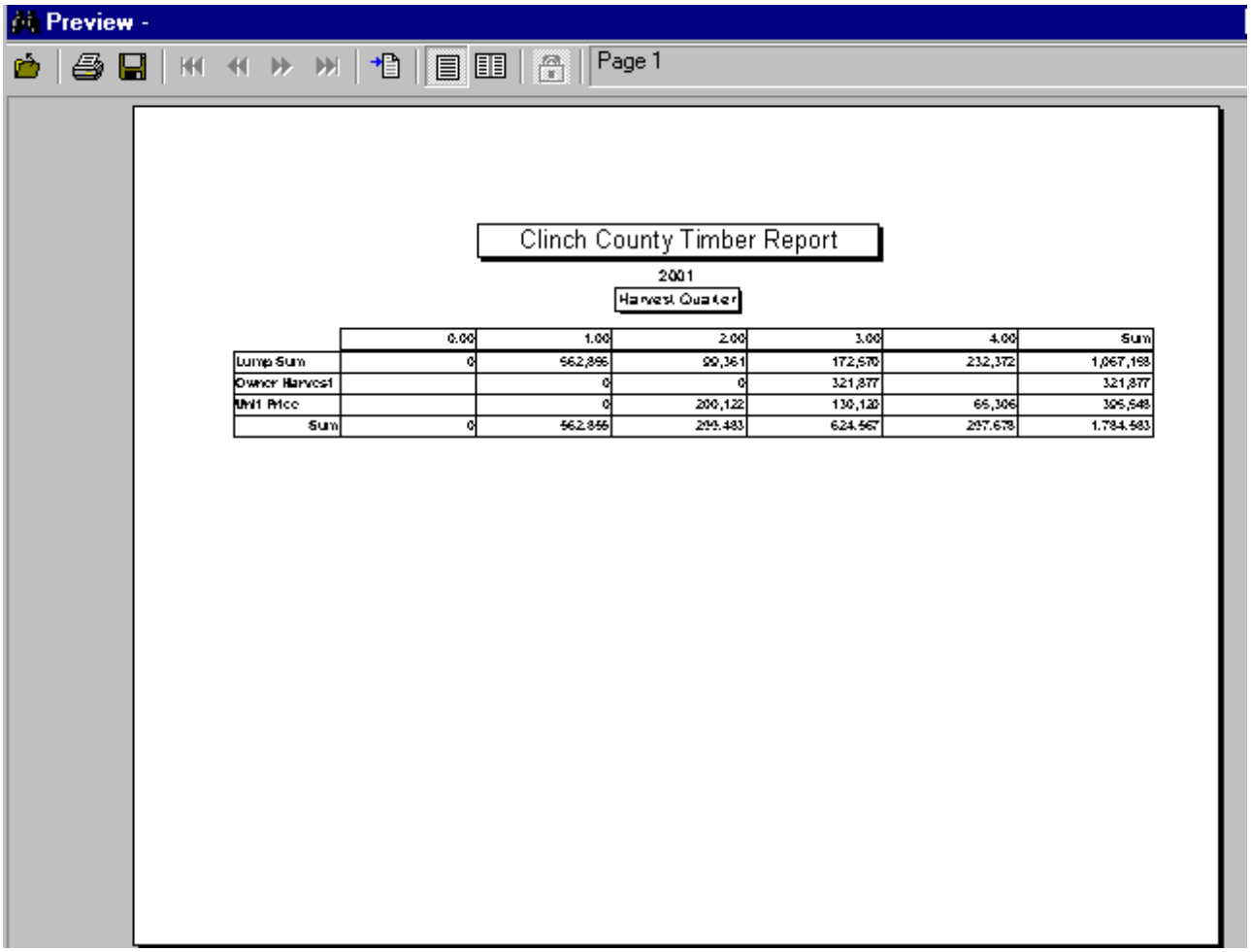


The Cross-Tab option

Selecting this option takes the user directly to the Cross-Tab Report Designer screen, as seen below, where the user selects the Table(s) to be used in the Cross-Tab report, and then performs all of the other steps needed to create the report. This option does not employ a "Wizard" to guide the user through the report generation process, and should be used only by individuals skilled in creating Cross-Tab reports.



An example of a Cross-Tab report is seen on the next page.



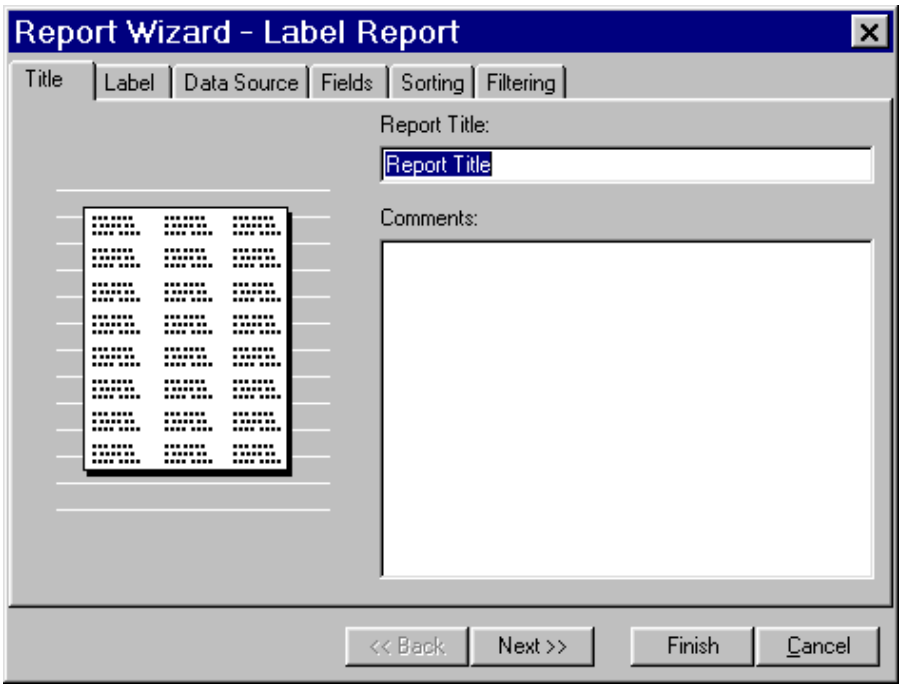
	0.00	1.00	2.00	3.00	4.00	Sum
Lump Sum	0	562,866	99,361	172,570	232,372	1,067,168
Owner Harvest		0	0	321,877		321,877
Unit Price		0	200,122	130,120	65,306	395,548
Sum	0	562,866	299,483	624,567	297,678	1,784,593

The Standard Report Wizard

Covered in detail beginning on page 91.

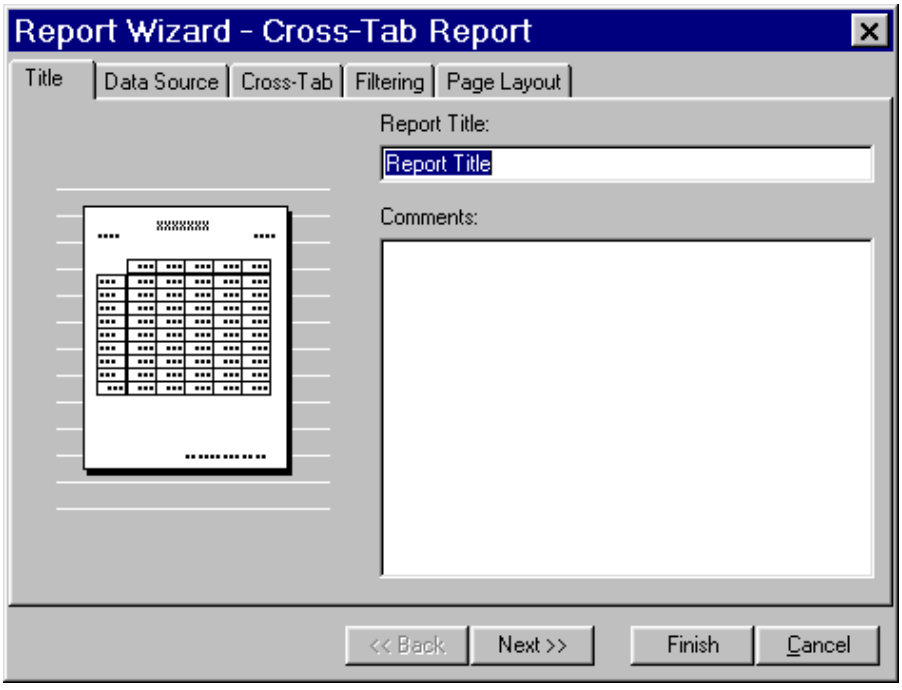
The Label Report Wizard

Selecting this option takes the user directly to the Label Report Wizard screen, as seen on the next page. The "Wizard" will guide the user through the steps needed to create the desired Labels. The steps are similar to those employed by the Standard Report Wizard.



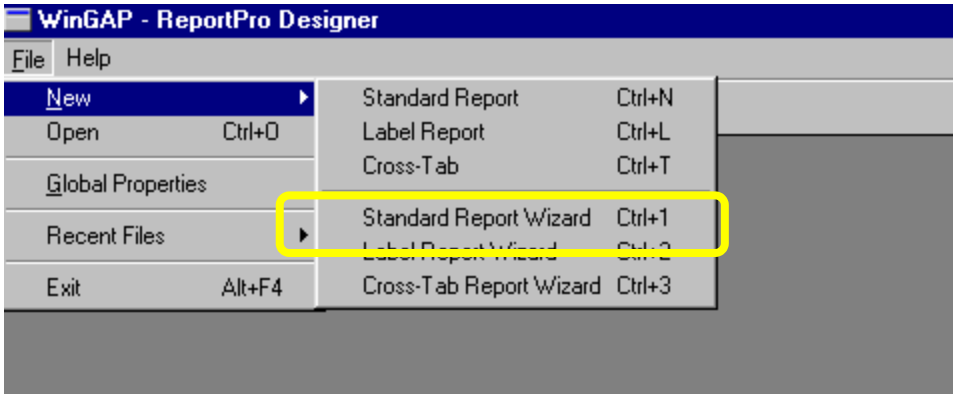
The Cross-Tab Report Wizard

Selecting this option takes the user directly to the Cross-Tab Report Wizard screen, as seen below. The "Wizard" will guide the user through the steps needed to create the desired Cross-Tab report. The steps are similar to those employed by the Standard Report Wizard.

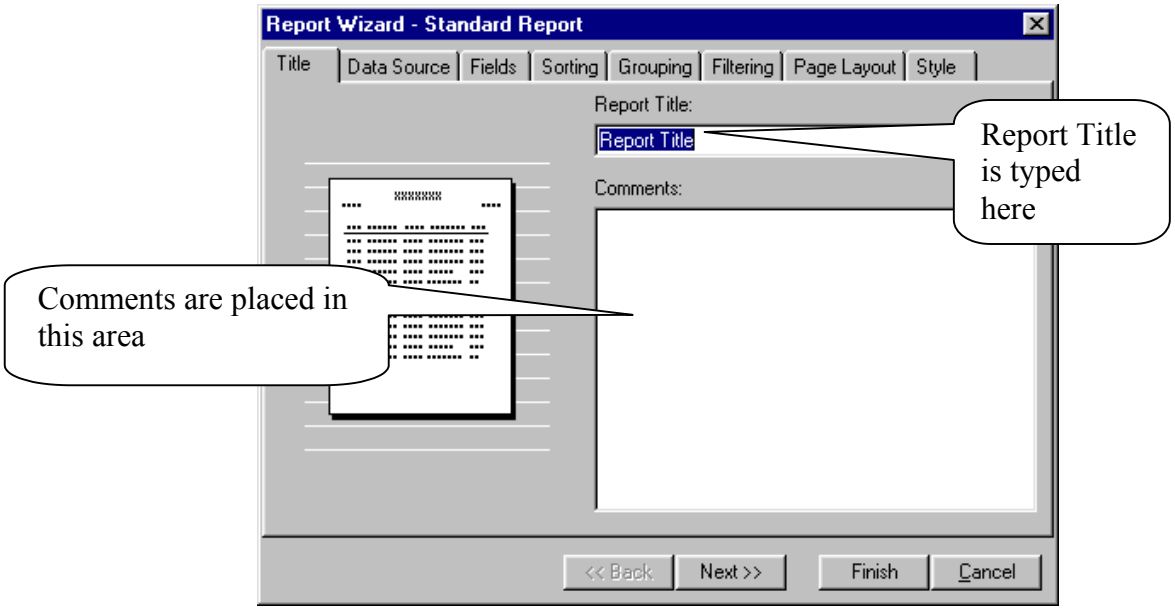


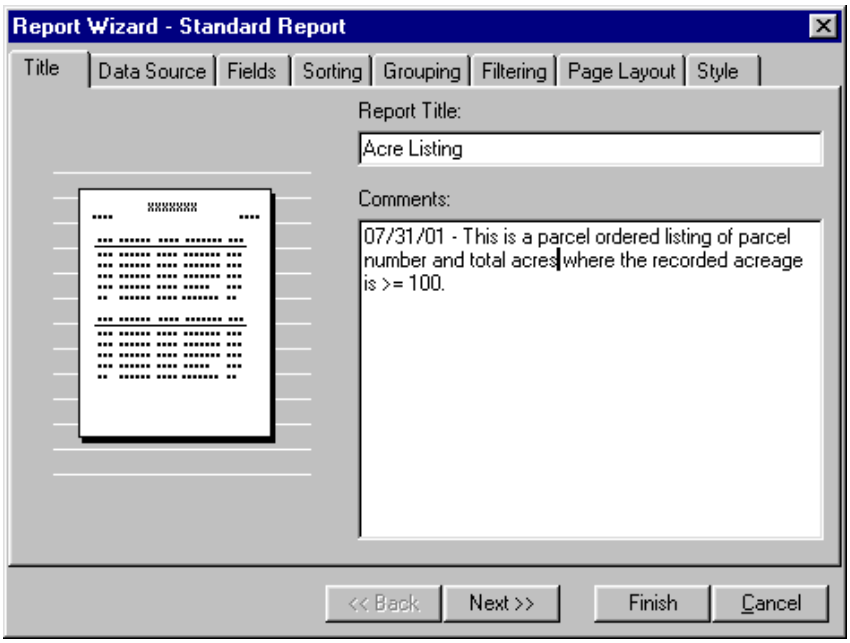
Creating A New Report Using the Standard Report Wizard

To create a new report, the user should pull down the **File** menu and select **New**. The user should then choose the option **Standard Report Wizard** as shown below.

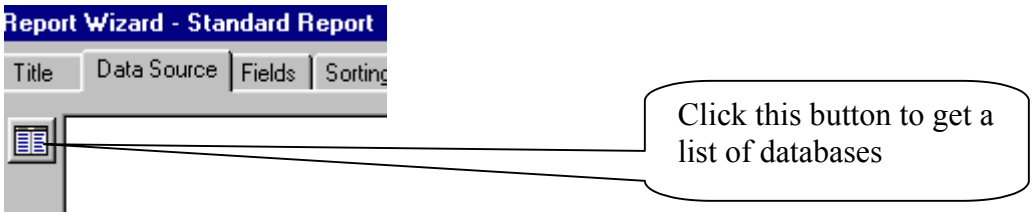


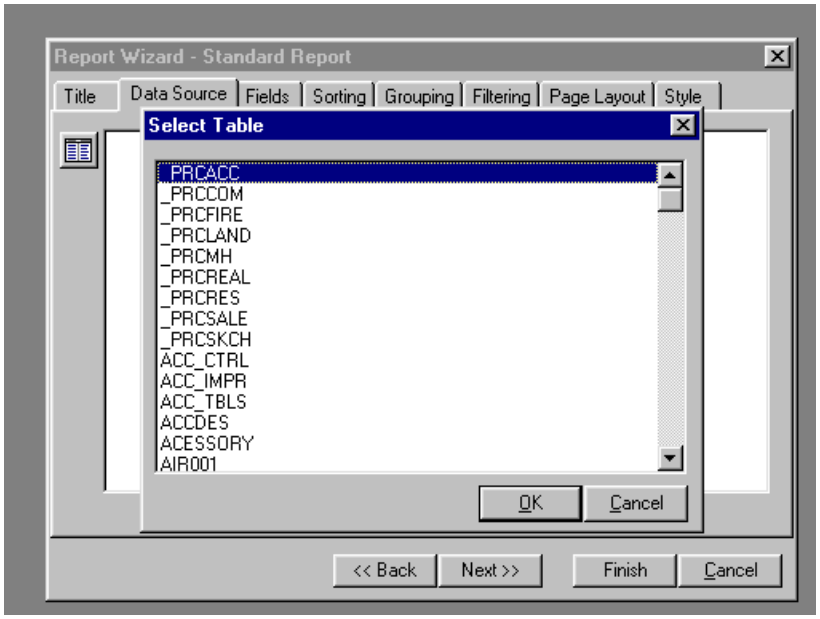
The Standard Report screen, below, will appear after following the steps above. The screen will default to the Title window. The user should type in the name of the report and any comments that would be helpful in determining at a later date the functionality and specifics of the report, as shown in the screens below and on the next page.



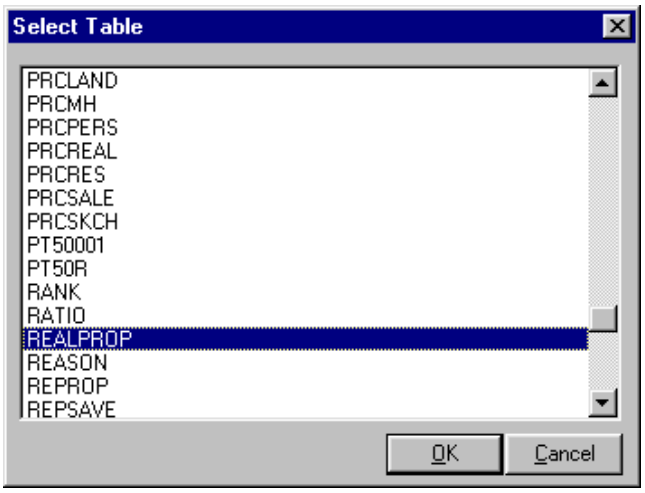


After completing the information on the Title screen, the user can proceed to the next step and display the Data Source screen by clicking **Next** or clicking on the **Data Source** tab, as shown below. The Data Source screen is used to select the table(s), or databases, that will be used in the report. The table selection is accomplished by clicking on the button below the Title tab as shown below. A list of databases in alphabetical order is presented, next page. The user can select from the list by using the scroll bar or pressing the first letter of the database name and them scrolling down to the correct one or using the up and down directional arrow keys to move the scroll bar to the proper position. After the database is selected, the **OK** button can be clicked.

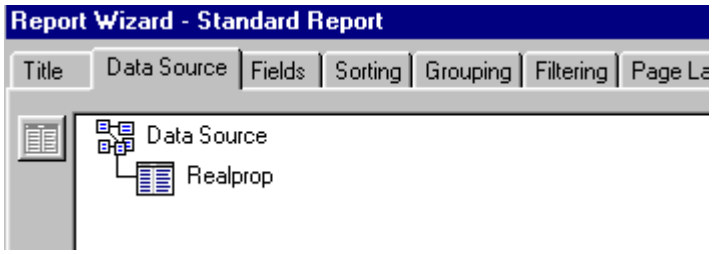




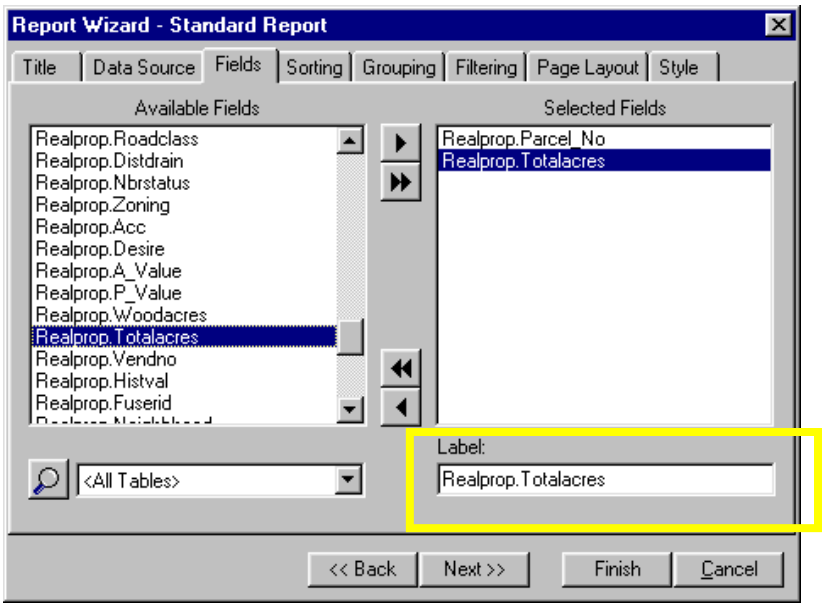
As shown on the screen below, the database **Realprop** was chosen for the Acre Listing report.



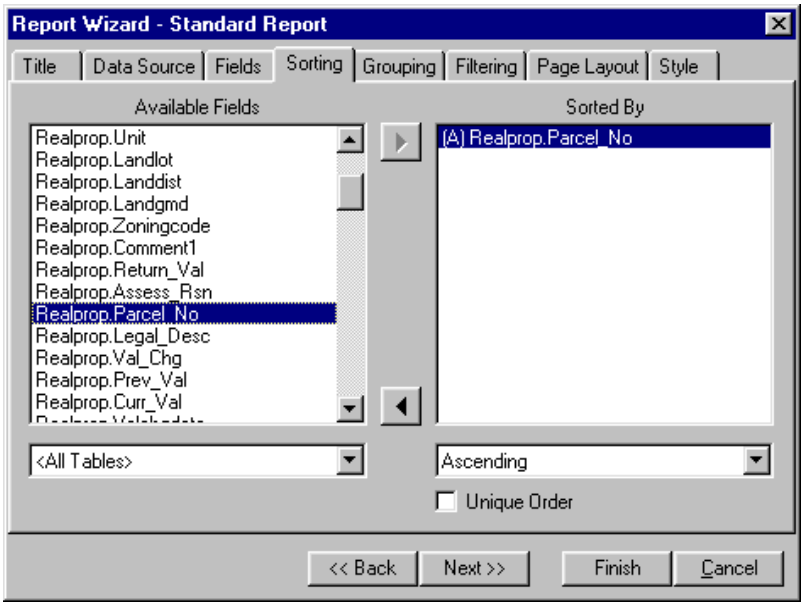
After clicking **OK**, the user is returned to the Data Source window with the selected file on the screen, as shown below.



The user can now proceed to the **Fields** screen, where the fields that are to be on the report can be selected, by clicking **Next** or the **Fields** tab. The fields are chosen by highlighting the proper field and then double clicking the field or clicking the > button. This will copy the fields from the Available Fields list box to the Selected Fields list box as shown below. At this time, the user can rename the column headings for the report. Unless modified, the report column headings will be named per what appears in the Label section of the form below. To modify the label, click in the label field and key the new text. In this example, the label Realprop.Totalacres could be changed to Acres and Realprop.Parcel_no might possibly be changed to Map ID.



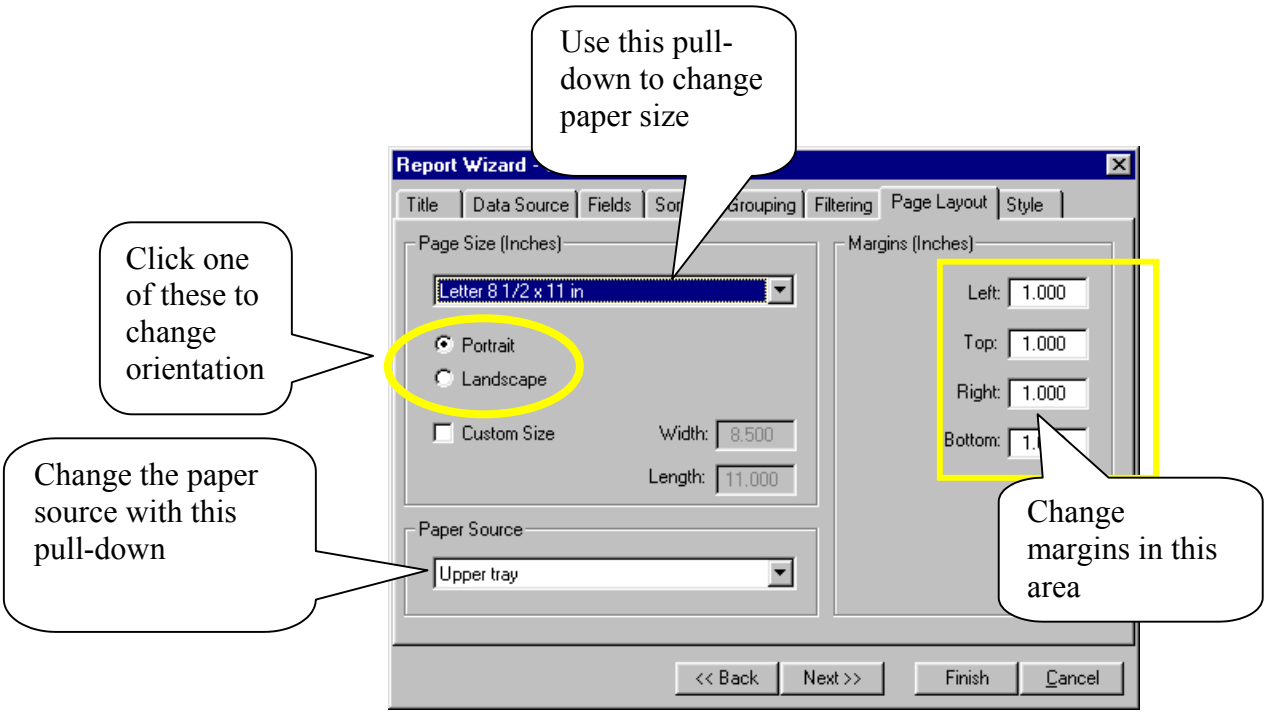
The next step in the process is to choose the order in which the report is to be printed. **Next** or the **Sorting** tab can be clicked to move to the subsequent **Sorting** screen. In this example, shown below, the order specified is parcel number. The sort order is selected in the same manner as in the field selection process.



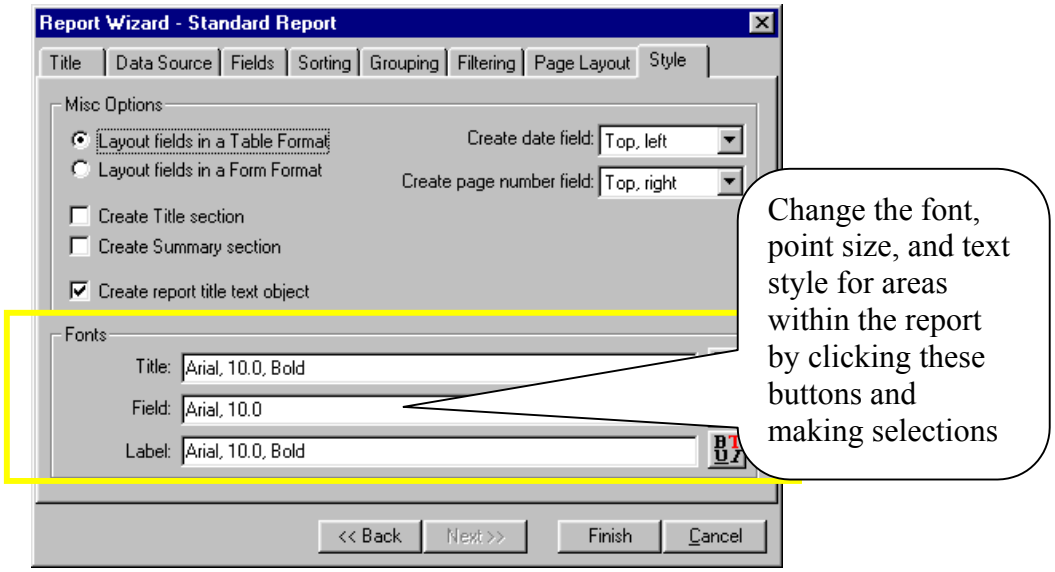
At this point, the next tab, **Grouping,** as seen below, will not be discussed other than to state that grouping must at least be done on the primary sort field (first one) or a combination of the primary plus secondary sort fields. **NOTE:** Grouping is covered in detail in the WinGAP Advanced Technical Workshop.

The next tab, **Filtering**, as shown below, allows the user to filter out any unwanted records by setting up conditions that the report is to be run under. Filtering will be skipped for now and handled later in the report generation process.

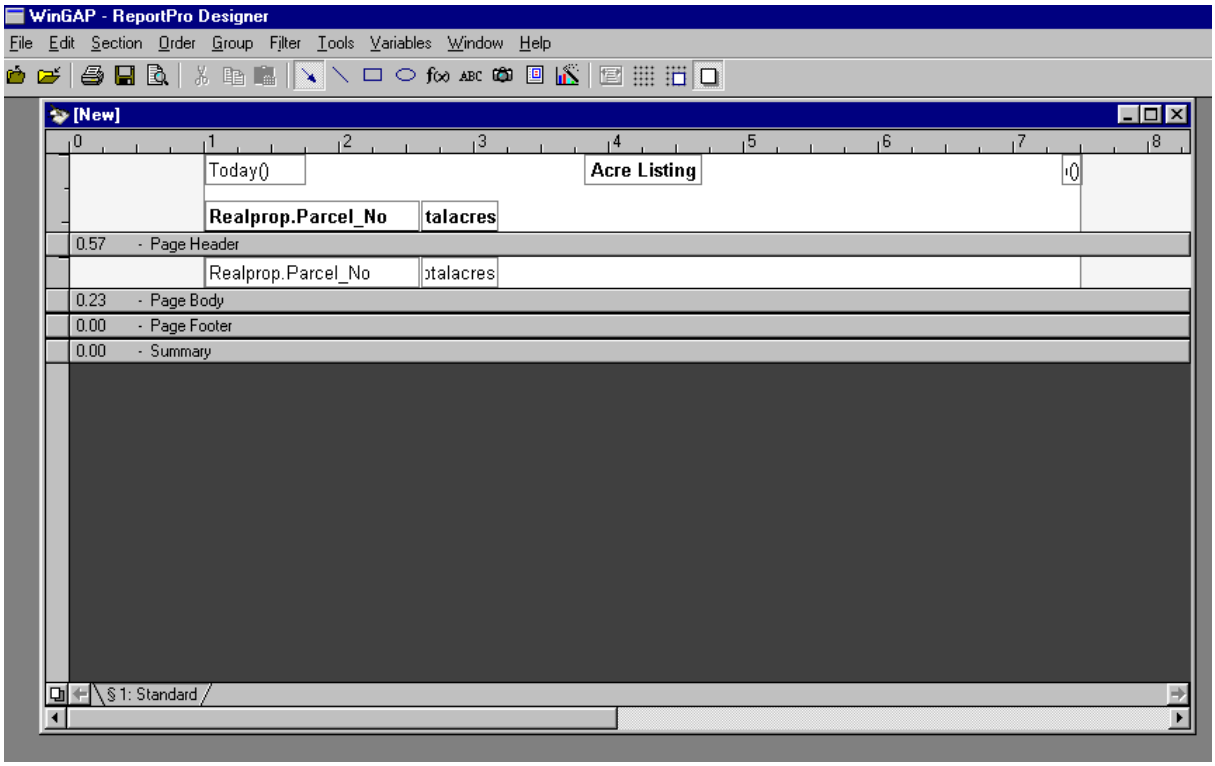
By clicking the **Page Layout** tab and using the subsequent **Page Layout** screen, the user can set the orientation, paper size, paper source, and margins, as seen below.



The user may find that at times it is necessary to change the margins, especially left and right, so that the report will fit on the paper size desired with the proper orientation. This change can also be made at a later time in the report creation. After the page layout has been set, the **Next>>** or the **Style** tab may be clicked to produce the Style window, below, where the report style may be customized.



Any of the default **Style** options may be modified to create the report style desired by the user. These can also be changed at a later time in the creation of the report. Clicking the **Finish** button will produce the Report Pro Design Canvas as seen on the next page.

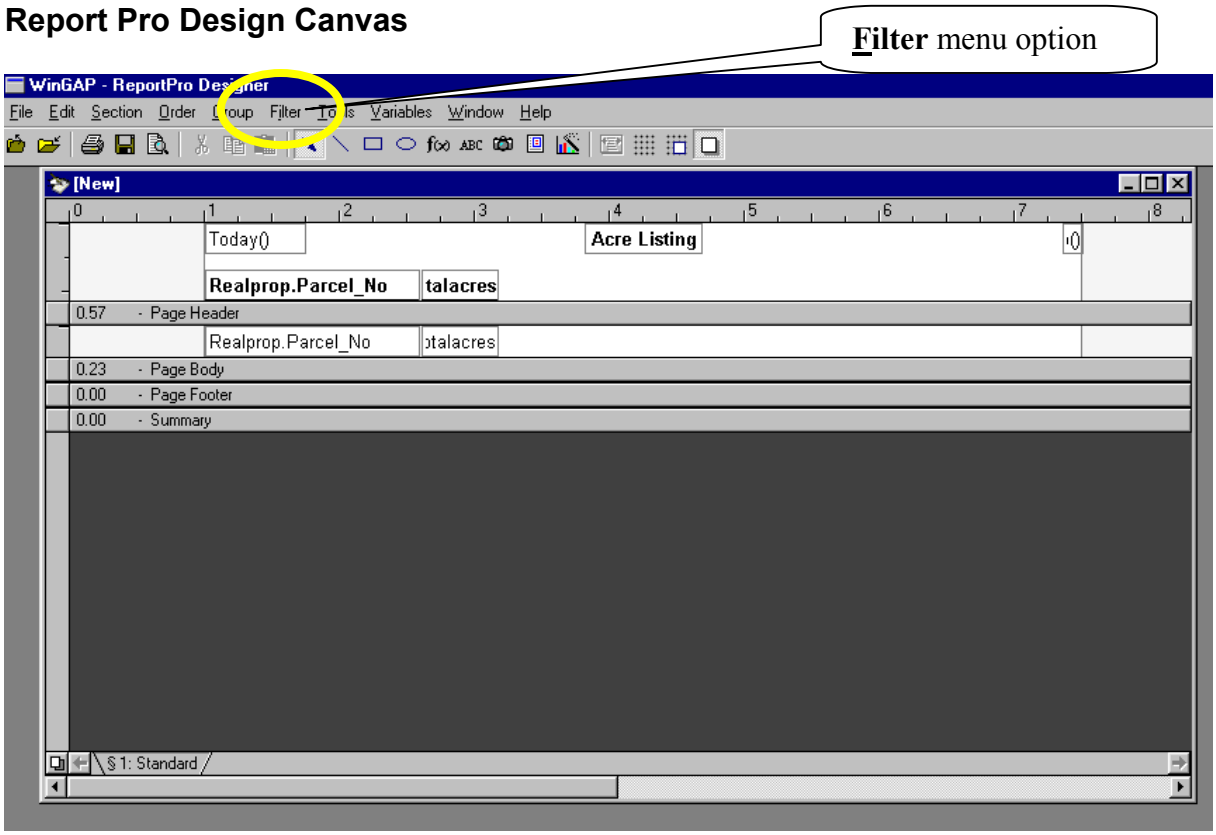


Report Pro Rules

Below are some basic Report Pro Rules about creating reports:

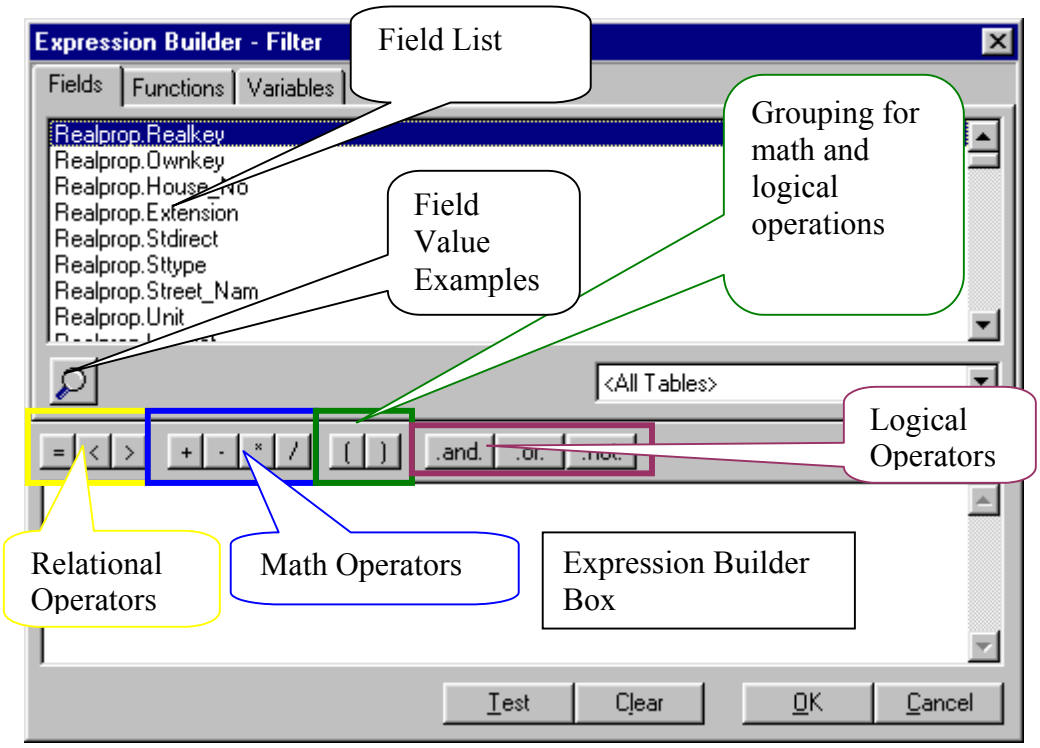
1) Break the report creation into segments. Examples of segments are the Report Pro Wizard (already discussed), the Design Canvas, creating an Order or Filter, and Previewing the Report
2) Maximize all Report Pro screens
3) Turn on the Grid
4) Turn on Snap to Grid
5) Expand the Page Number field
6) Expand (move down) the Bands
7) Make sure that a Temporary Folder has been created, as discussed earlier in this section.

Report Pro Design Canvas



It is at this point that the user can make major modifications to the report's design in order to produce a report with the look and style desired. However. if only a quick listing is needed with no attention to style, the report can be run just as it is after the filter is set. To set the filter for the report, the user must click on the **Filter** menu option, highlighted in the image above, which will produce the screen known as the **Expression Builder – Filter** window, as seen on the next page. Here the user may select the field(s) and build the necessary expression that will filter out any records that are not wanted in the report. A filter expression in its simplest form will contain the following components and must be constructed in the order specified:

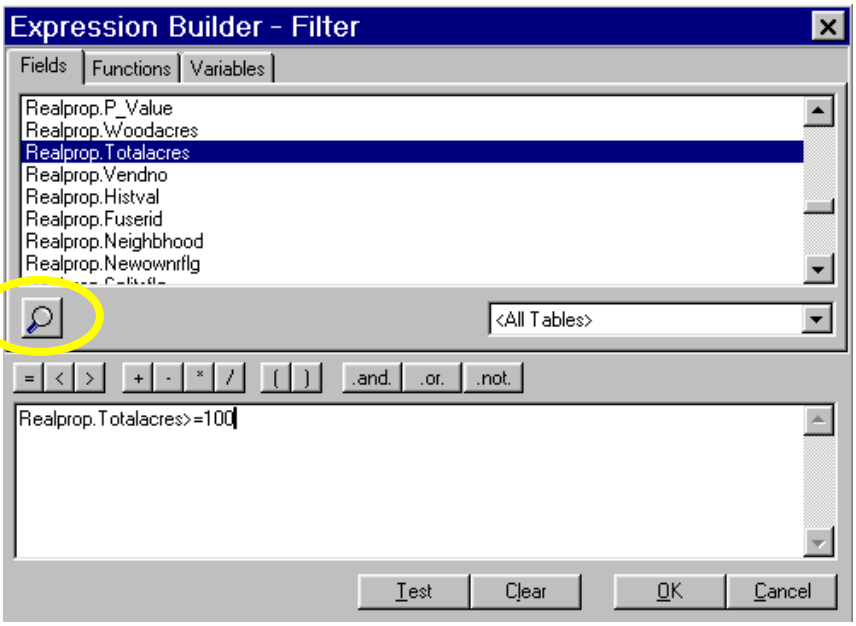
1. **Field Name** – obtained from the field list and inserted by double-clicking
2. **Relational Operator** – inserted by clicking the appropriate relational operator
3. **Comparative Value** – user must click in the Expression Builder Box and key in the value to the right of the relational operator if the value is not a field. If the value is a field, the user can find it in the field list and double-click to insert to the right of the relational operator.

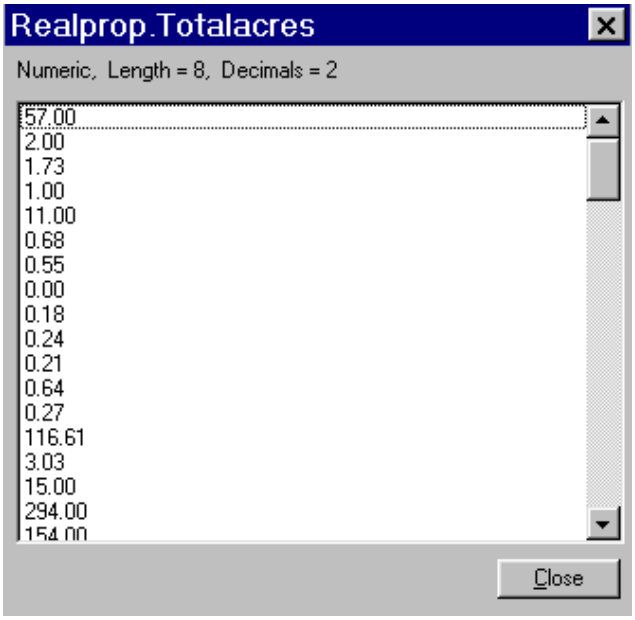


In this example, only parcels with acreage greater than or equal to 100 acres are desired. The user must now select the field that contains the total acreage of the parcel. The selection process is the same as that which was done earlier in the report design when the fields and sorting where setup. The user must find and double click the field **Realprop.Totalacres** which will place the field in the expression builder box. (Note: If the user is familiar with the field names, the field names may be typed in the expression builder box by clicking in the box and typing the field name and the remainder of the expression). After building the expression as seen on the next page, it is advised that the user check the validity of the expression by clicking on the **Test** button and receiving the message shown below.

An invalid expression will show the following message:

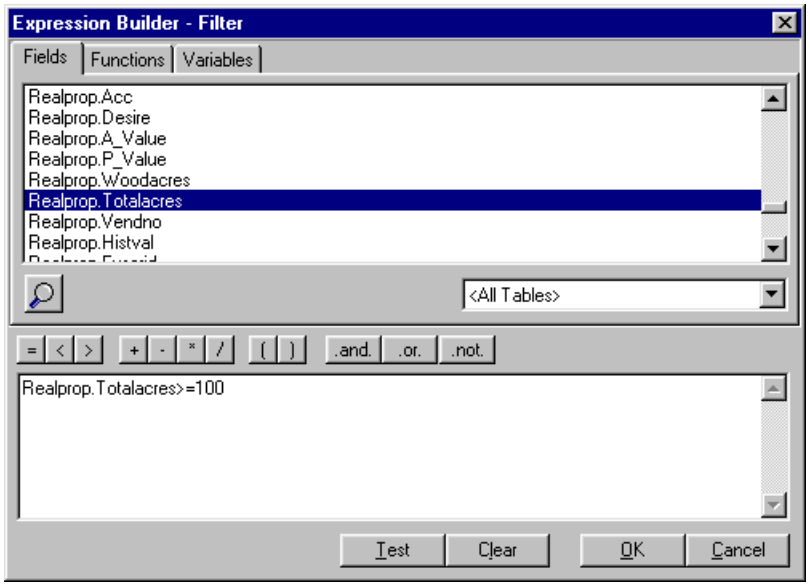
With either a valid or invalid expression the user must click **OK**. If the expression is invalid or in error, the user must correct it before proceeding. The Expression Builder Form contains a tool than can be helpful in creating and modifying expressions, particularly when the user is unsure of the type of field (numeric, character, etc.) that is being used to create the expression. The user can click the Magnifying Glass, as shown on the image below, and the Expression Builder Form will display relevant information, also shown below, about the field that is highlighted in the upper window on the Form.



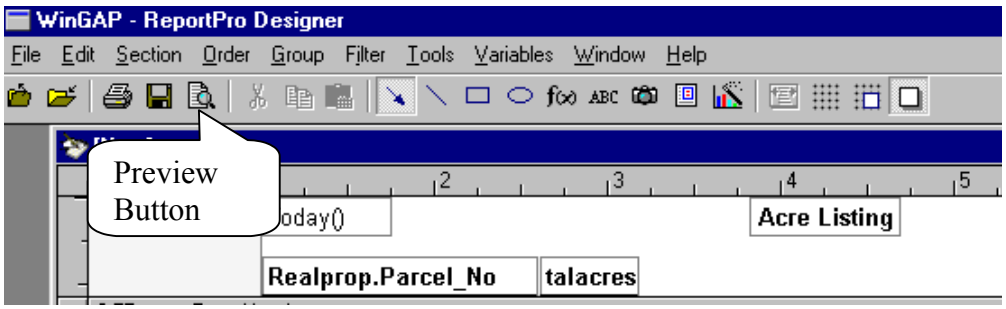


As shown in the image above, the Totalacres field in Realprop is a numeric field, with a width of 8 with 2 decimals. Examples of the actual Totalacres data in Realprop are shown in the window. If the user was attempting to build an expression using Totalacres as a character field, the Magnifying Glass could help correct this error in the expression.

Once the expression tests as valid, the user may click the **OK** button found at the bottom right of the **Expression Builder – Filter** window, as seen below, and be returned to the **Designer** window.

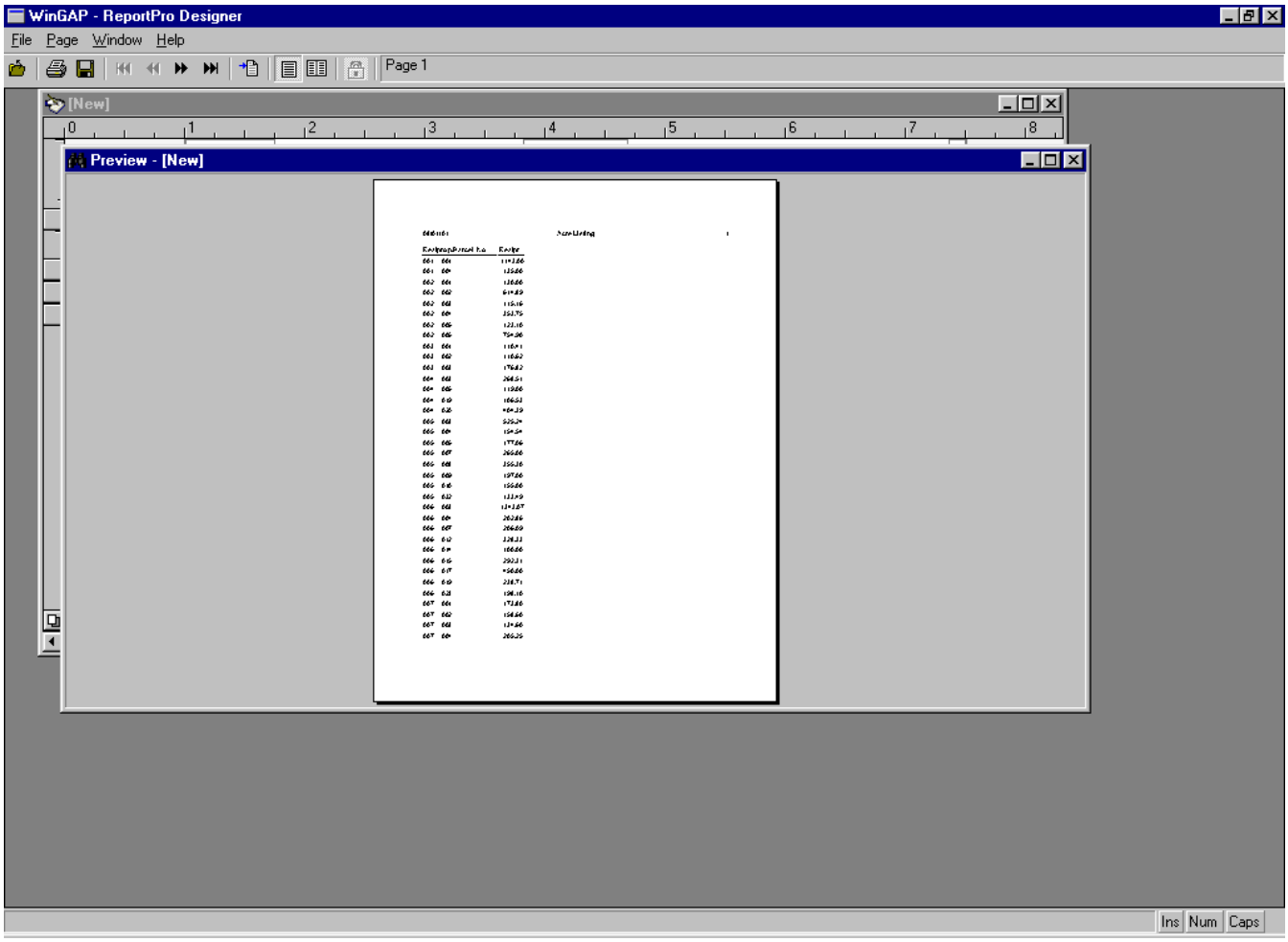


A preview of the report can now be run by clicking the Preview button on the tool bar.



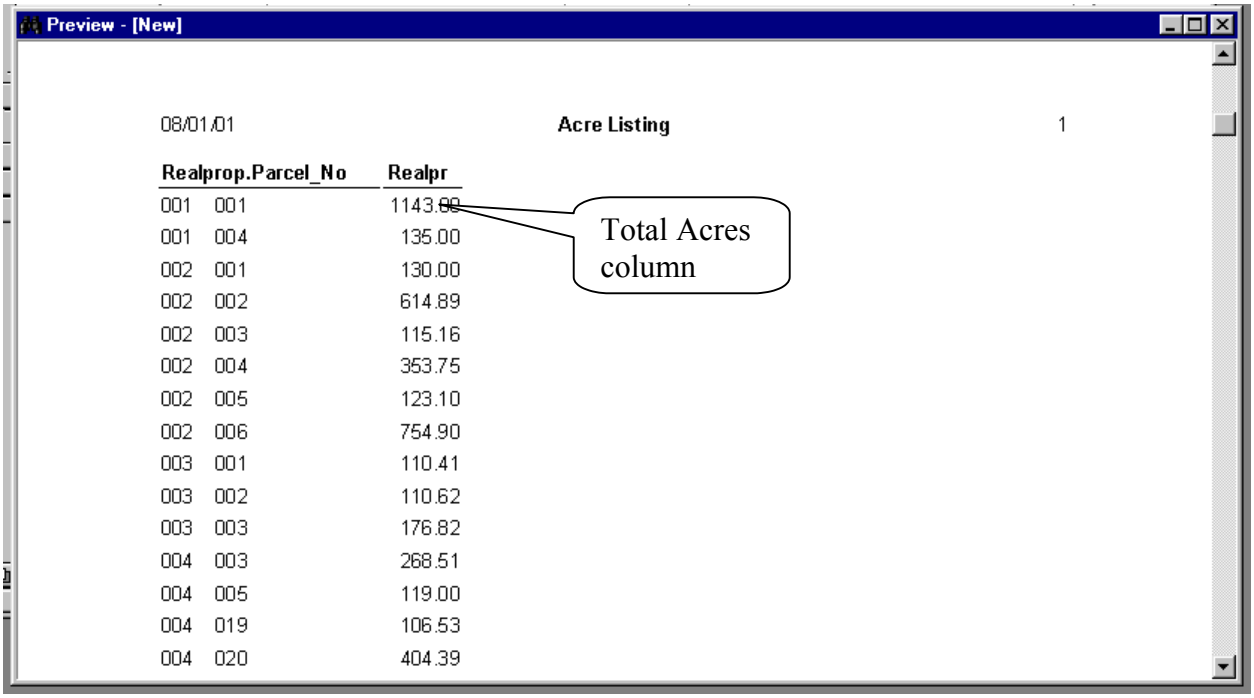
A preview of the report allows the user to decide if any changes need to be made before wasting time and paper on a report that is not satisfactory. The report preview can be seen in the screen image on the next page.

As one can see, the content of the report is too small to see.

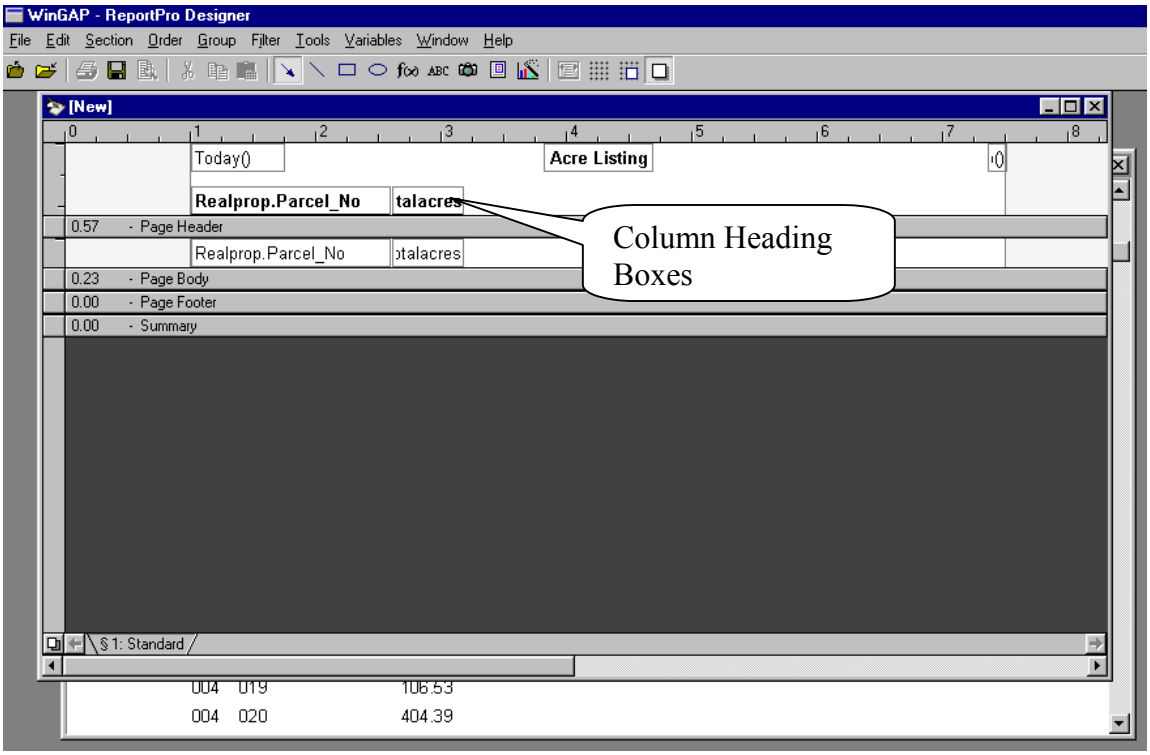


In order to magnify the report to a visible level, the user can bring the mouse pointer down onto the report. The user will notice that the mouse pointer changes to a magnifying class, where the user can click as many times as necessary to enhance the visibility of the document. A right click of the mouse will reduce the scale.

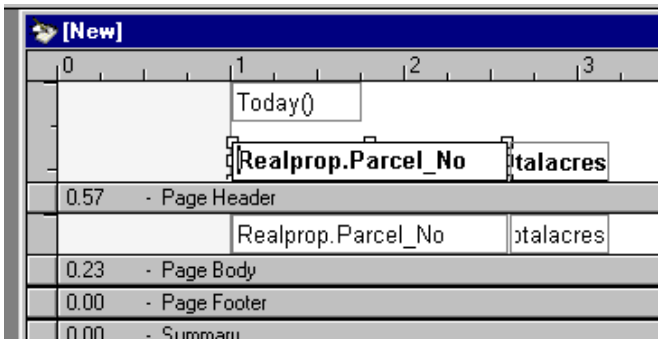
The report is shown below with the scale of the report increased to a visible level. However, it can be seen that some modifications may need to be made in order to make the report more presentable. The column headings are field names and can be changed to represent more common terminology.



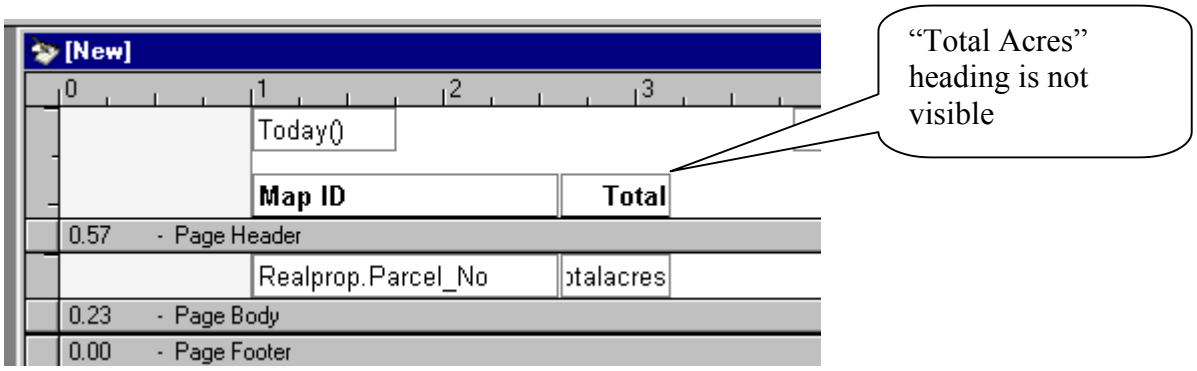
In order to make these modifications the user can click back on the Designer window behind the preview and bring the following screen forward.



If the column heading for Realprop.Parcel_No is to be changed to “Map ID” and the acreage column is to be changed to “Total Acres”, the user can double click in the column heading box found in the **Page Header** section of the report, as shown below. After double clicking in the box, the user can key any desired text. Clicking out of the box will save the modifications.



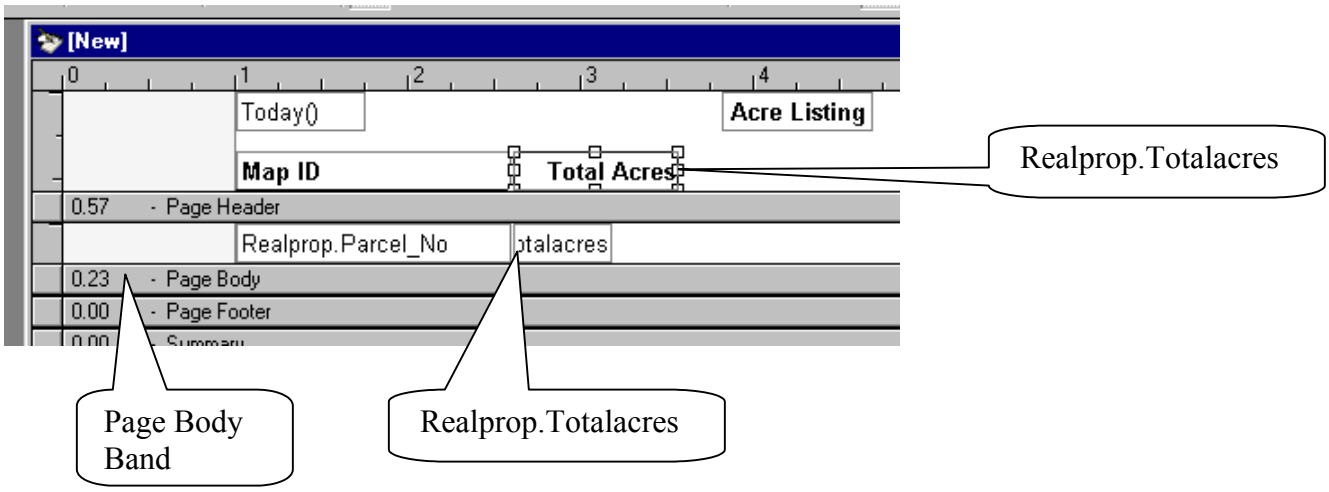
In the next screen shot, the Realprop.Parcel_No and the Realprop.Totalacres headings have been changed but the Total Acres heading is not visible.



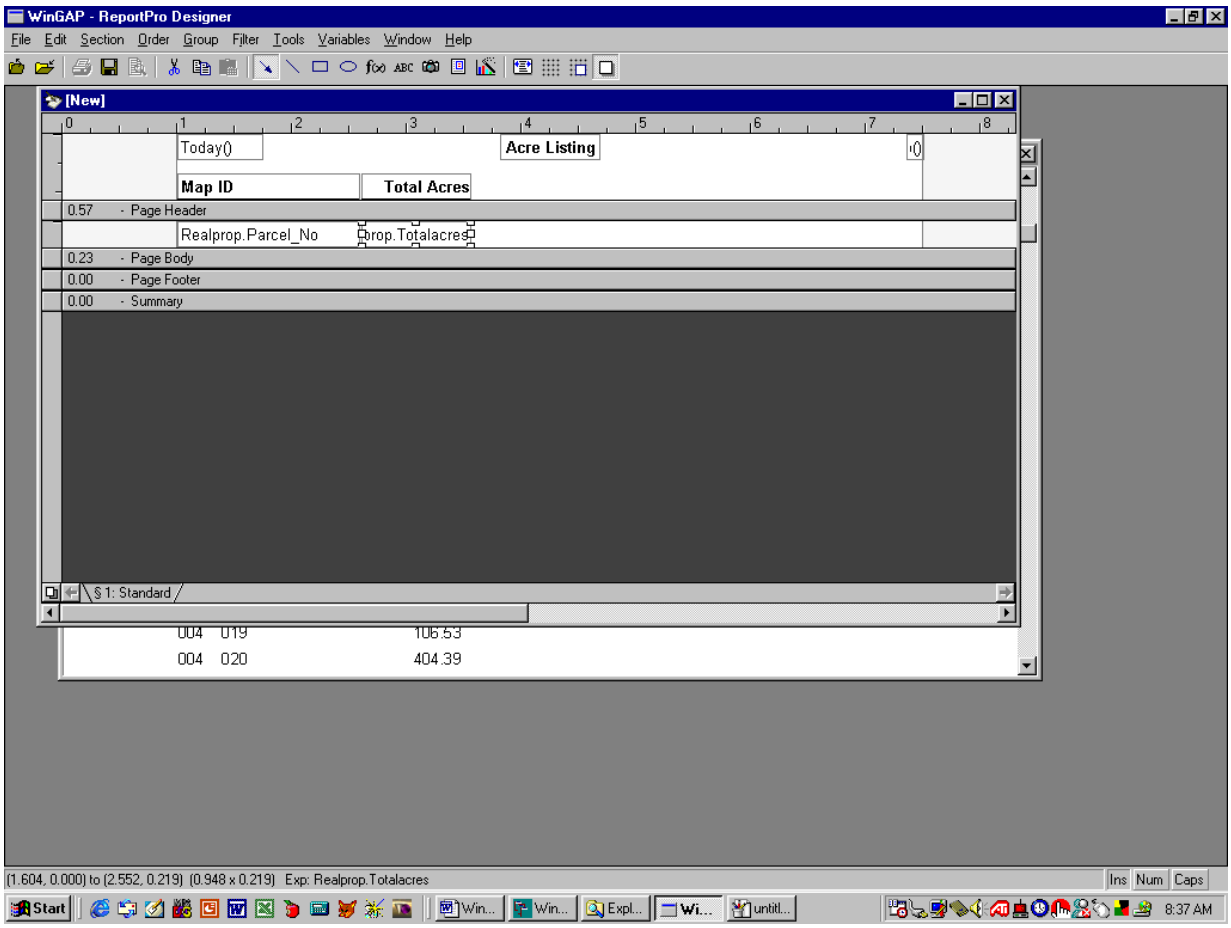
The heading box must be stretched to provide adequate display area. To stretch the box, the user must have the **Pointer Tool** selected and then click on the box where 8 squares appear at the corners and midpoints of the lines. Since the box needs to be stretched to the right, the user should:

1. place the mouse on the square in the middle of the right vertical box line (the mouse pointer should turn into a double headed horizontal arrow)
2. hold the right mouse button down
3. drag the line to the appropriate position which is to where the full heading can be seen
4. release the mouse button

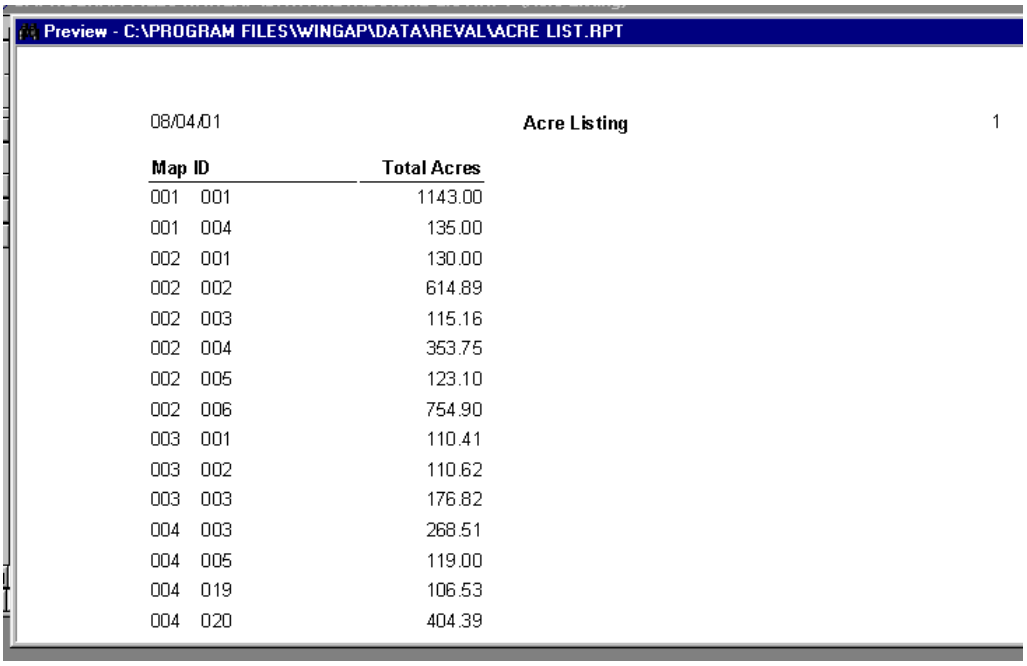
The results should appear as on the screen below. As can be seen in the screen below, in addition to stretching the column heading, the field box that holds the Total Acres in the **Page Body** band of the report also needs to be stretched.



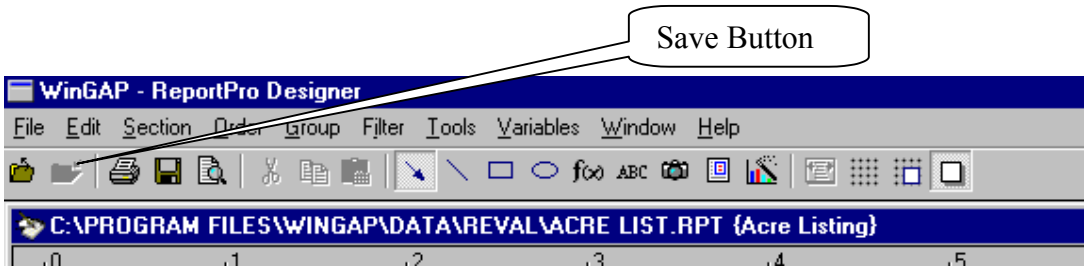
The stretching is done in the same manner as with the column heading. The results should resemble the screen shot below.



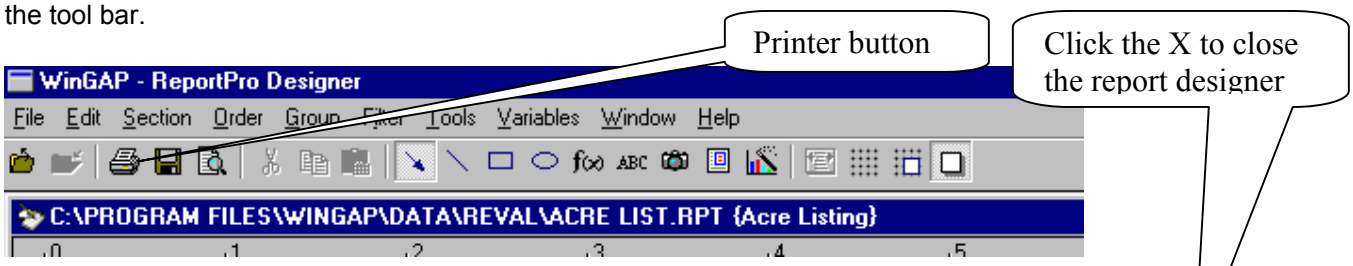
The page number in the report also needs stretching. This will need to be done on any reports over 9 pages in length. The stretching is done in the same manner as the Total Acres field, except it is stretched to the left. The new preview should look like the one below.



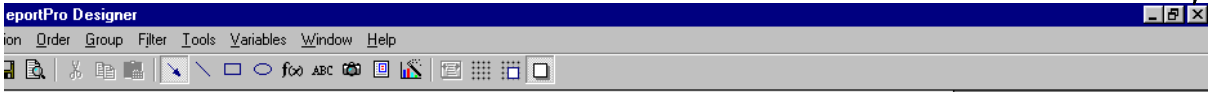
When the user is satisfied with the report, it may be saved by pulling down the **File** menu and choosing **Save** or clicking the save button on the tool bar and giving it an appropriate file name. Long file names can be used. Saving the report is suggested prior to printing. In this example, save the report with a file name of "Acre List".



To print the report, the user may go to the **File** menu and choose **Print** or click the printer button found on the tool bar.



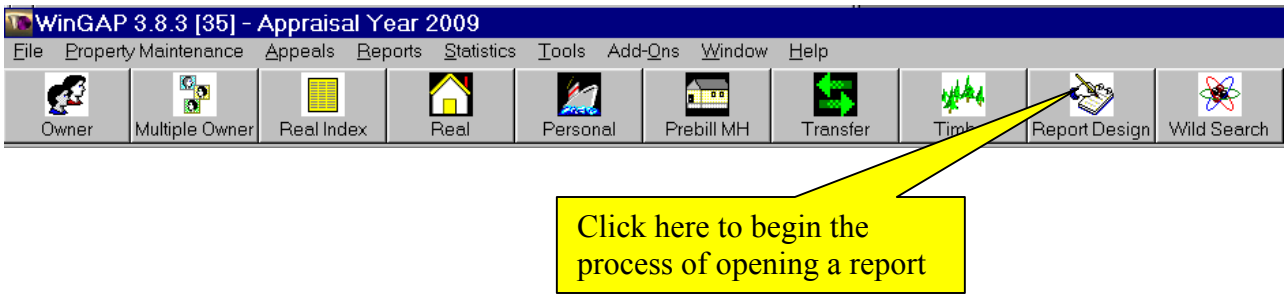
The report designer can now be closed by clicking the **X** in the upper right hand corner of the screen.



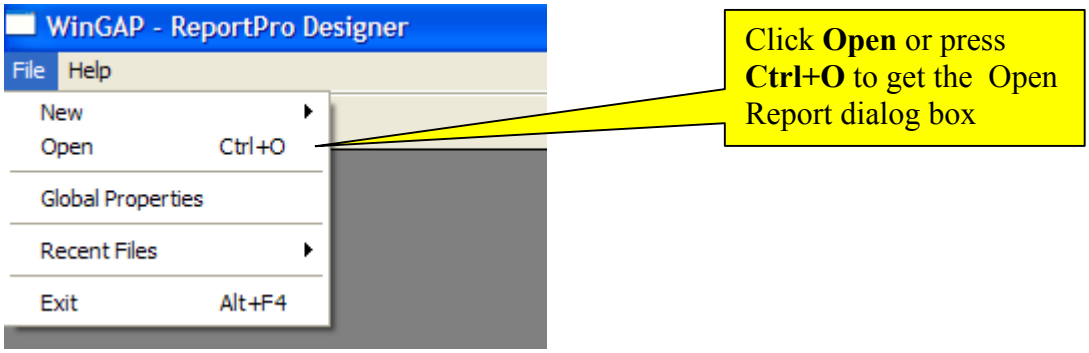
Modifying an Existing Report

In this example we want to modify the Acre List report by adding the owners name, land value, and price per acre and making sure that deleted records are not part of the report. Before a report can be modified, it must be opened. In this example, we are assuming that the original report, Acre List, has been saved and closed.

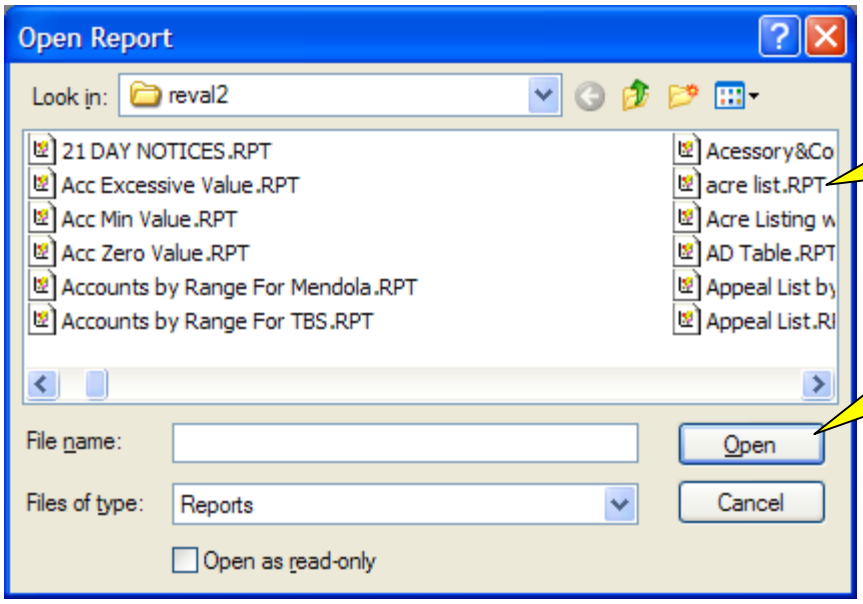
To open a report, the user should click on the Report Design tool bar button.



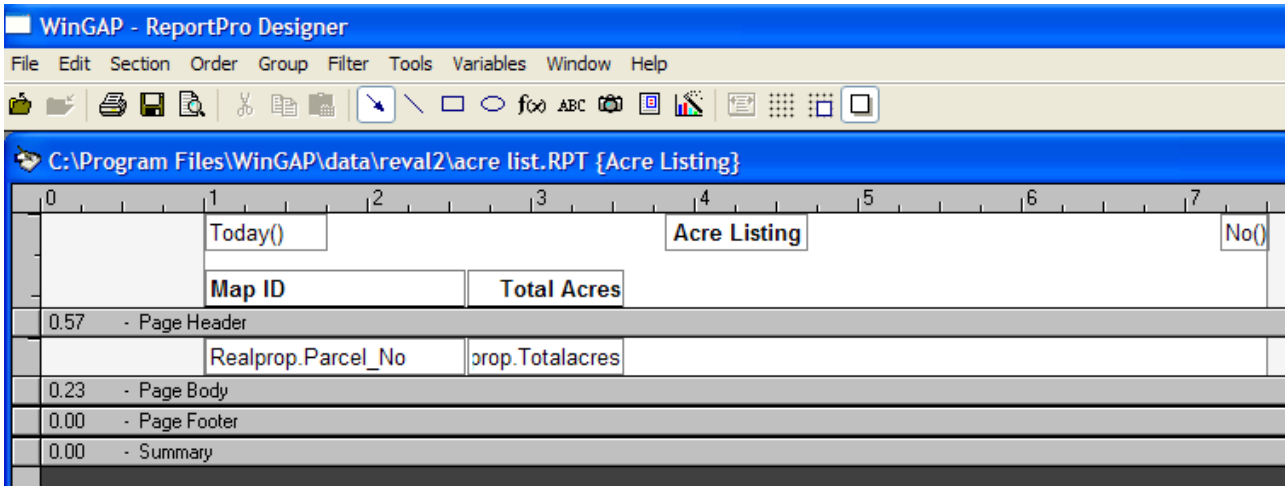
After clicking the Report Design button, the user will have access to the ReportPro menu. The menu, **File**, should be selected providing a list of options with Open being the one to select.



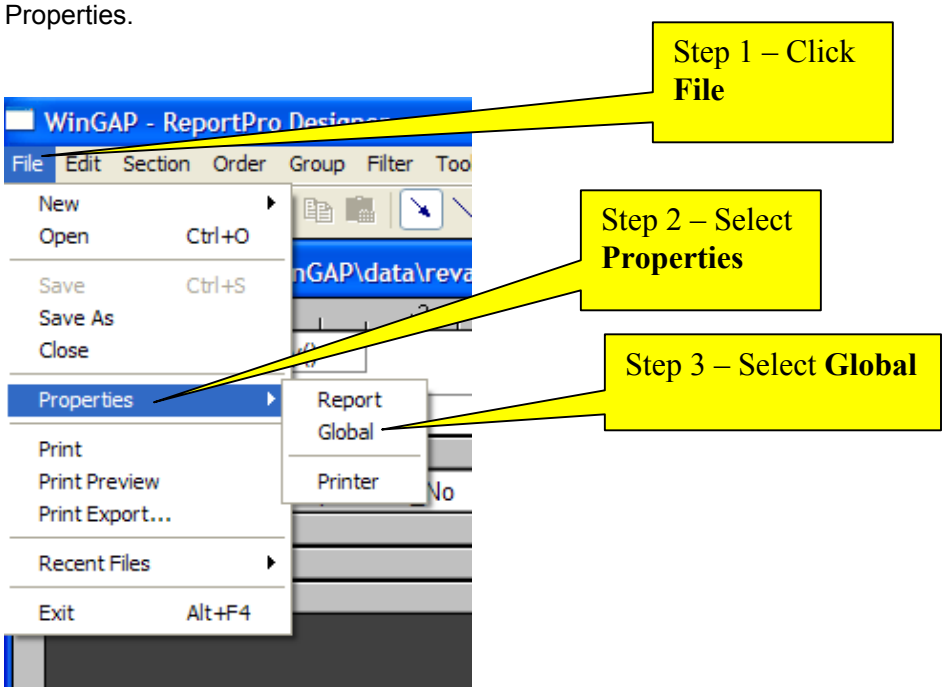
The Open Report dialog box will appear, as shown on the next page.



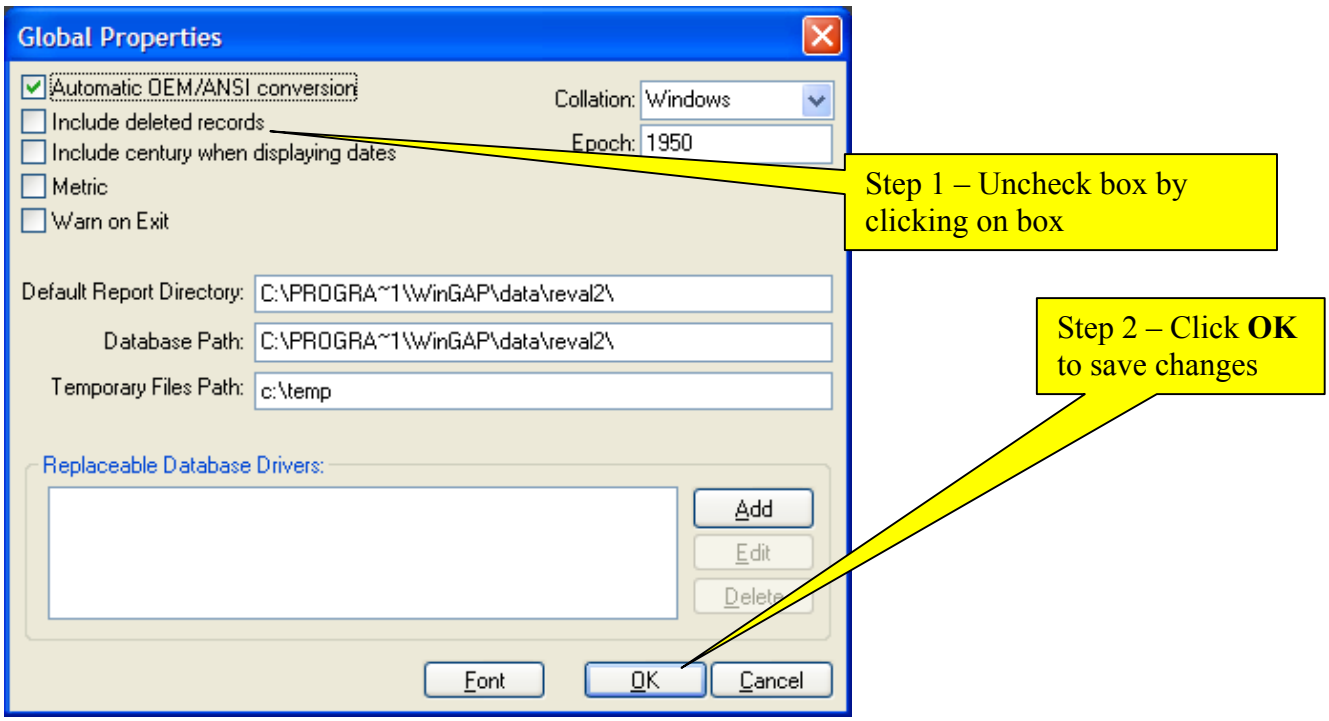
The report should now be opened in the Report Design mode as shown below.



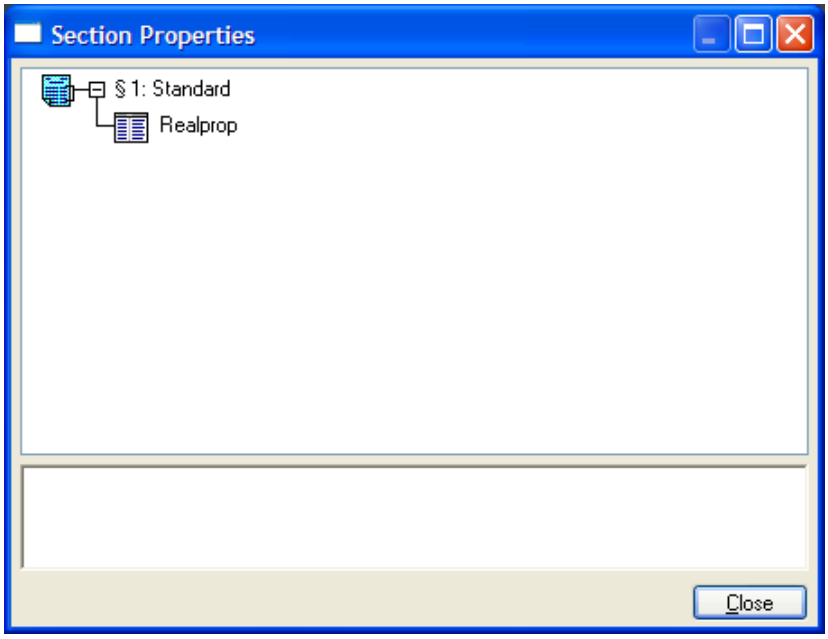
The first step in the revisions of the Acre List report is to exclude deleted records from the printing process. This exclusion is done through the **Properties** option on the **File** menu. Click on File and then select Properties.



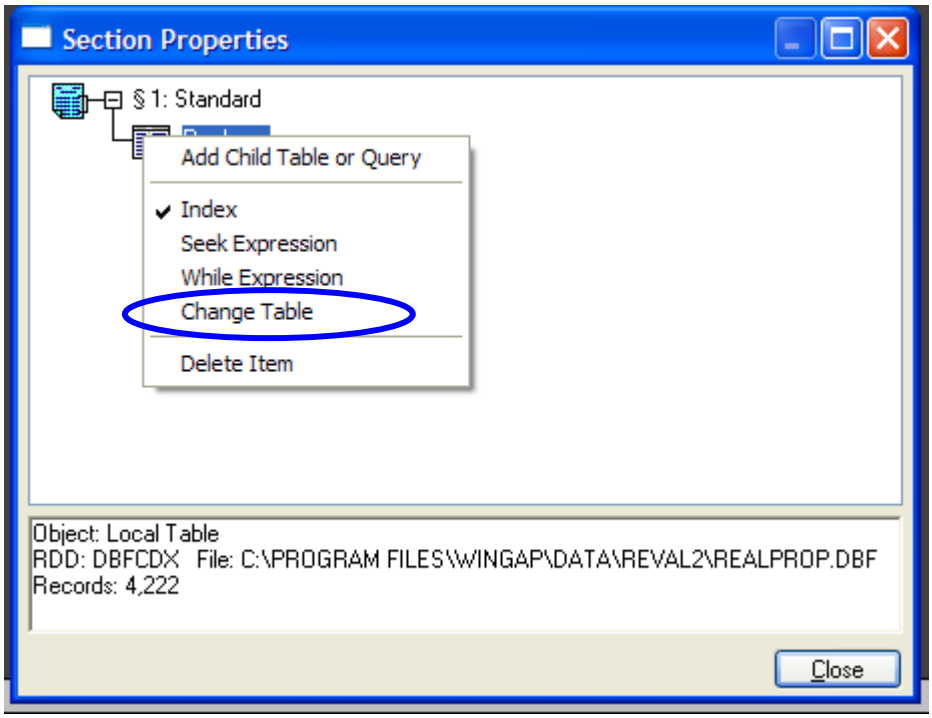
After the selection of **Global** is made, the **Global Properties** dialog window will appear. **Global Properties** allows the user to set the properties for this report. In order to exclude deleted records, the "Include deleted records" box must be unchecked by clicking in it if a check mark is present.



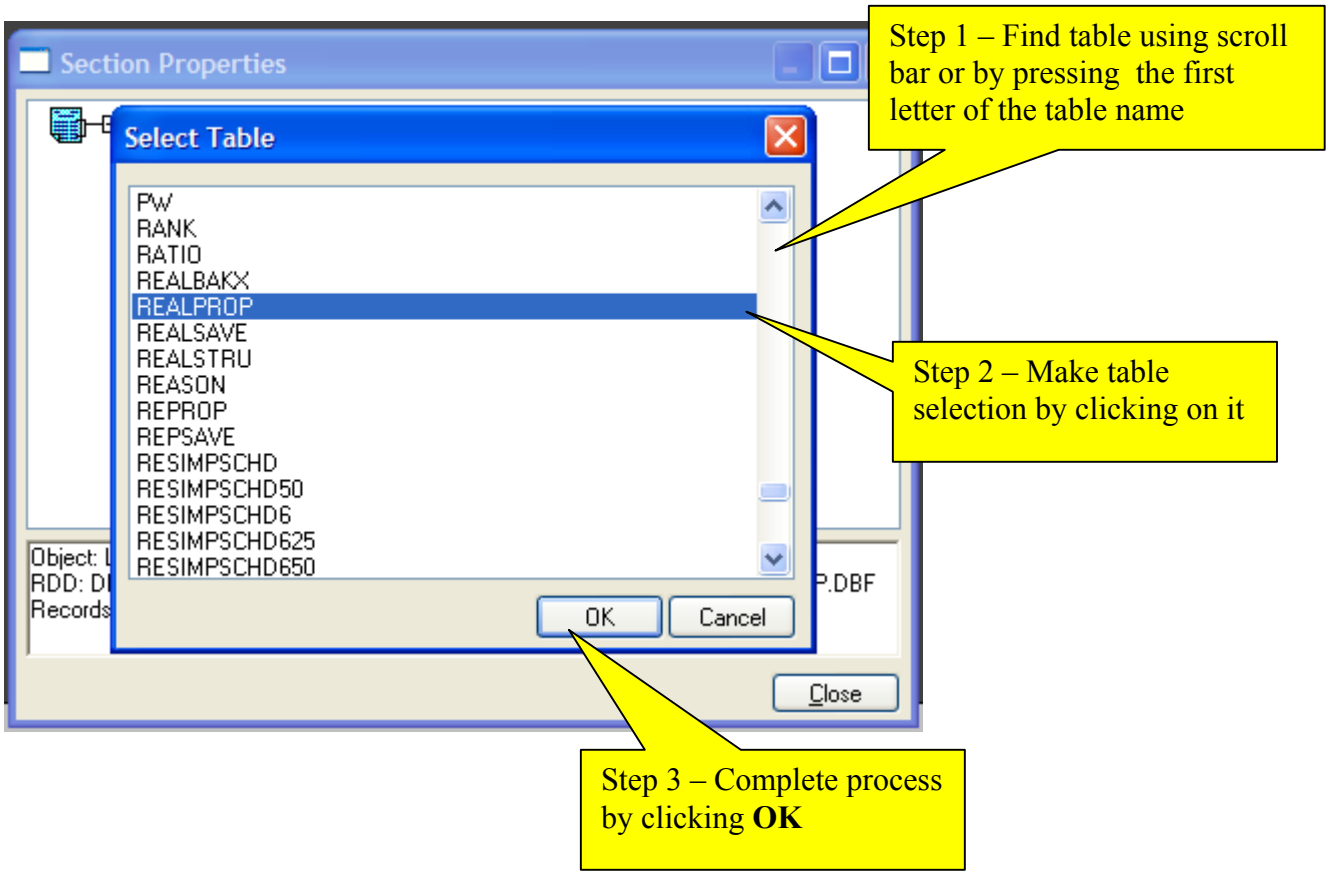
If the report was created in a folder other than the current one or on another computer off of the network, the user must make some changes to insure that the report will be using the data in the present folder. These modifications are performed by going to the **Section** menu option which provides a view of the tables used in the report as well as access to the tables for making changes.



To direct the report to the correct data, right click on a file listed in the view. A menu will appear where the user can select the option “Change Table” by clicking on it.



The “Change Table” selection will produce a listing of tables in the current folder. The user should choose the same table as the one that was selected for a change. The choice is made by using the vertical scroll bar to find the table in the list, left clicking on it and then clicking **OK**.



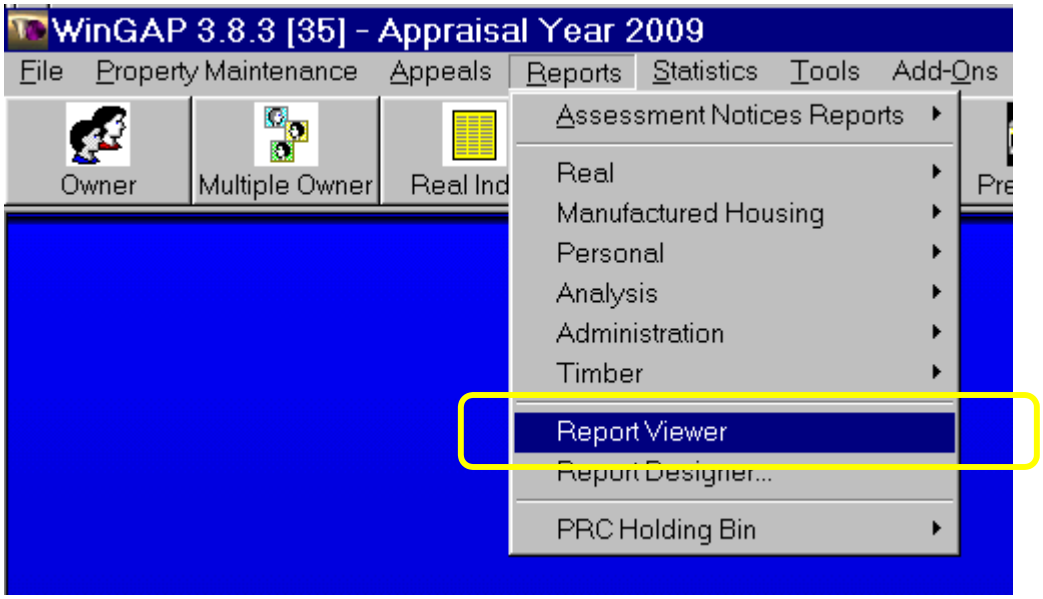
The steps above must be followed for each table shown in the **Section Properties** window.

Note: The above process need only to be done when the report was built using data outside of the current path/folder.

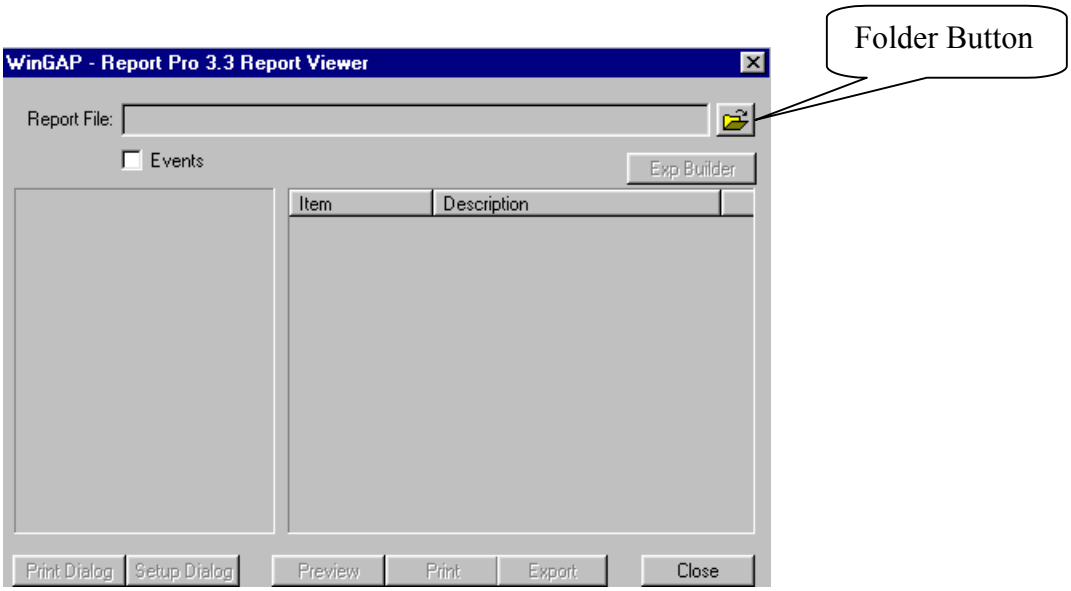
The user can now proceed with making any modifications to the report.

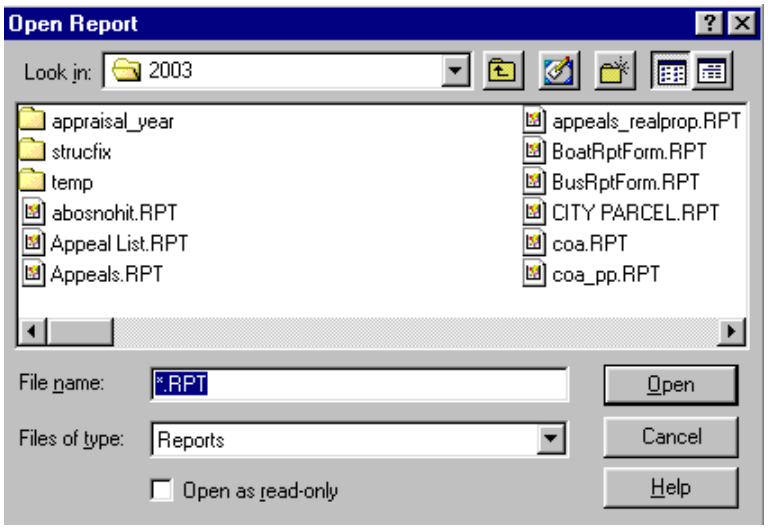
WinGAP Report Viewer

The Report Viewer included with WinGAP is designed to offer the user a way to preview/print a report and make temporary modifications to the report filter, if desired, without permanently changing the report. To start the report viewer, the user should select the Reports>Report Viewer option as shown on the screen below.

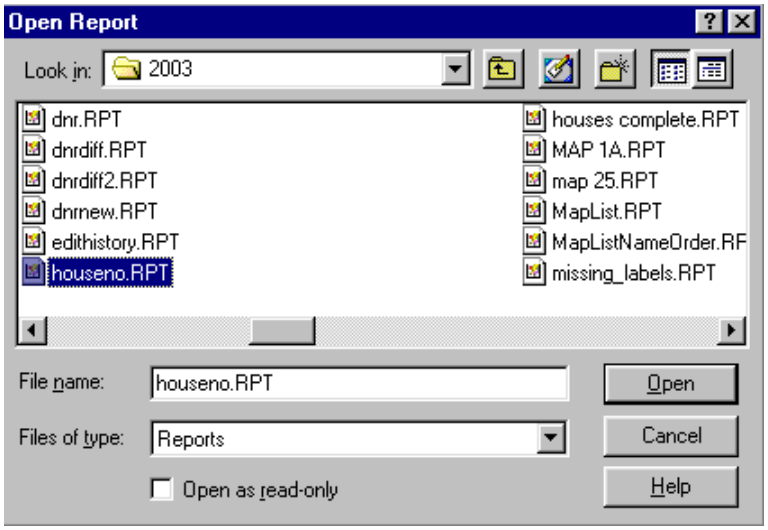


Clicking on the Report Viewer option takes the user to the Report Viewer Form. The first step in viewing a report is to select the report file for the report that is to be viewed. This is done by clicking on the Folder Button on the upper right of the Report Viewer, below, which will produce the Open Report window, next page.

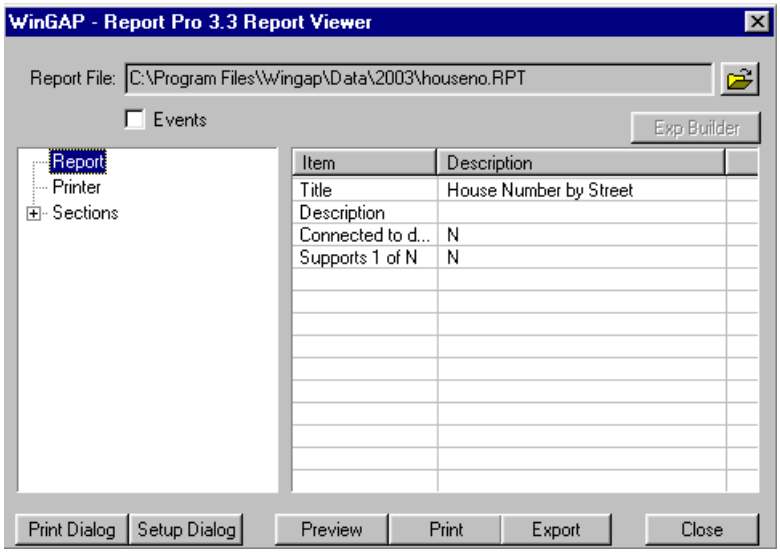




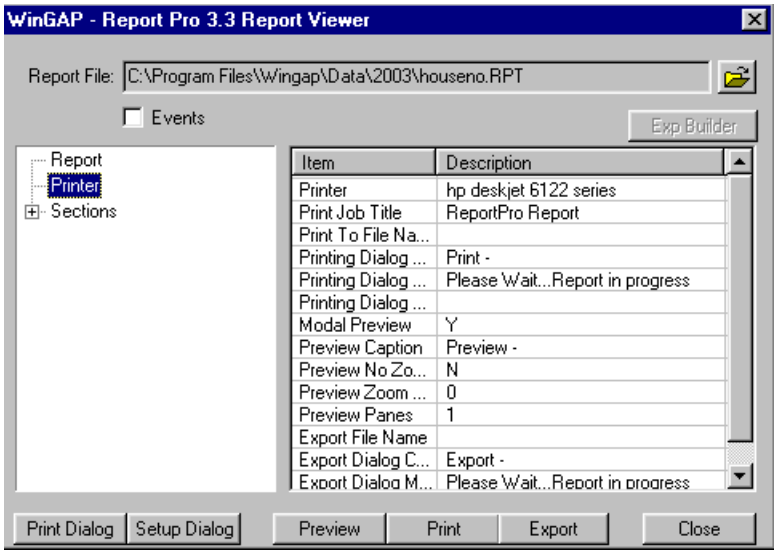
The user will be provided a list of reports that are found in the appraisal year folder where work is in progress. The report file the user wishes to open, in this case Houseno.rpt, which prints the House Number and Street listing in Reports >> Real, should be located and selected by clicking on the file name. The file name will then appear in the File name field located towards the bottom of the Open Report window.



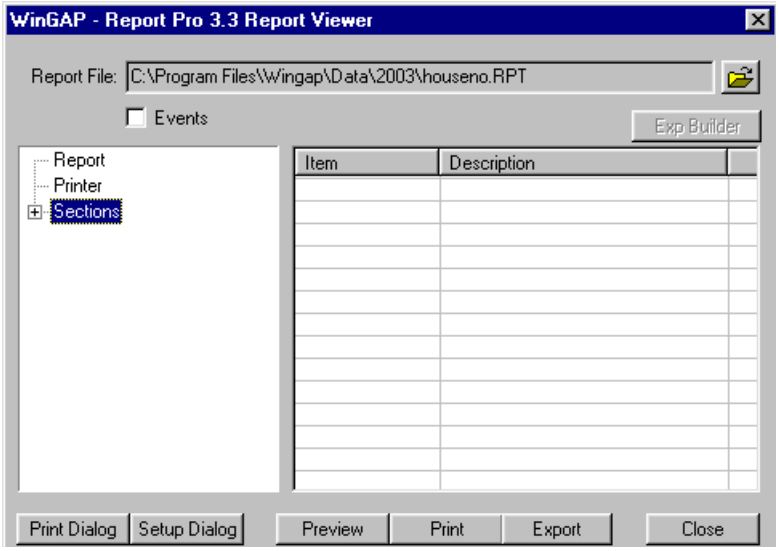
The Open Button should be clicked to open the file in the Report Viewer Form, which will display as seen on the next page.



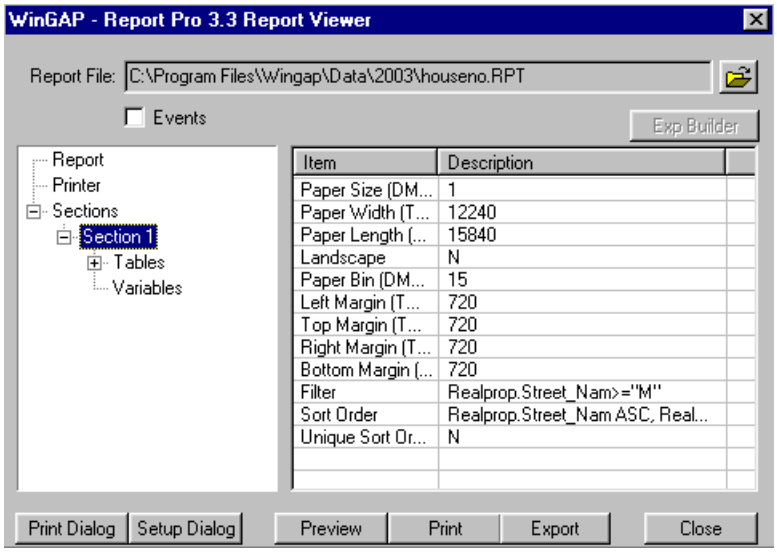
The Report Viewer Form consists of two panes. The left pane contains the Report, Printer and Sections headings. The right pane will display the detail of each of these items. If the user clicks on the Report heading, the detail for the report is displayed in the right pane, as shown above. If the user clicks on the Printer heading, Printer information is displayed in the right pane, as shown below.



If the user clicks on the Sections heading, however, no information will be displayed.

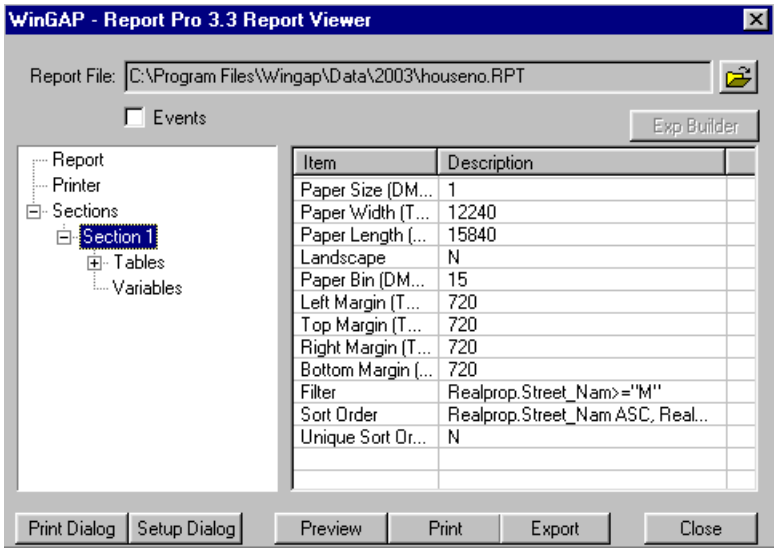


This is because the user must click on the "+" sign next to the Sections heading, and then click again on the "+" sign next to the Section 1 heading to expand, or display, the Sections of the report, as shown next.

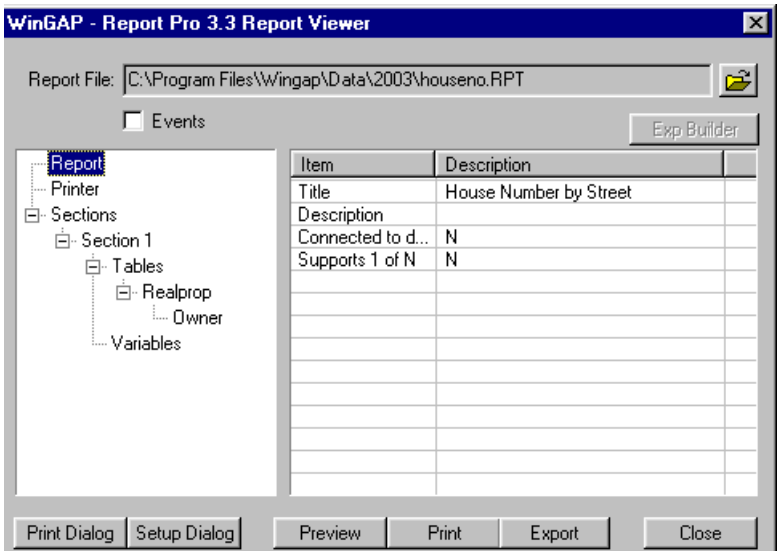


All reports in WinGAP will have at least one Section, as in the Example above. **Note:** Reports containing multiple sections cannot be run from the Report Viewer. More complicated reports will have multiple Sections.

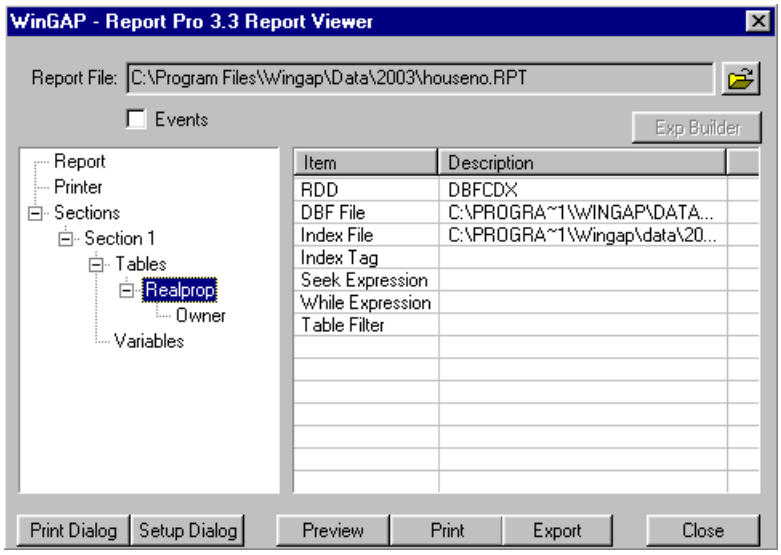
The Tables (database files) and Variables (memory variables) that make up Section 1 of the report are now displayed in the left pane, with information about Section 1 displayed in the right pane, as shown below.



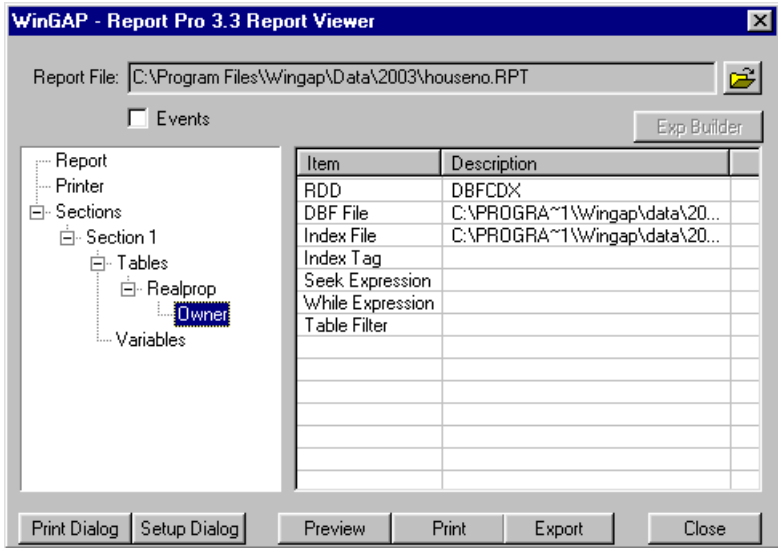
As can be seen below, there is also a "+" next to the Realprop table, which means there is at least one "child" table of Realprop in this report. Clicking on this "+" sign will display the child table(s), in this case, Owner, as seen below.



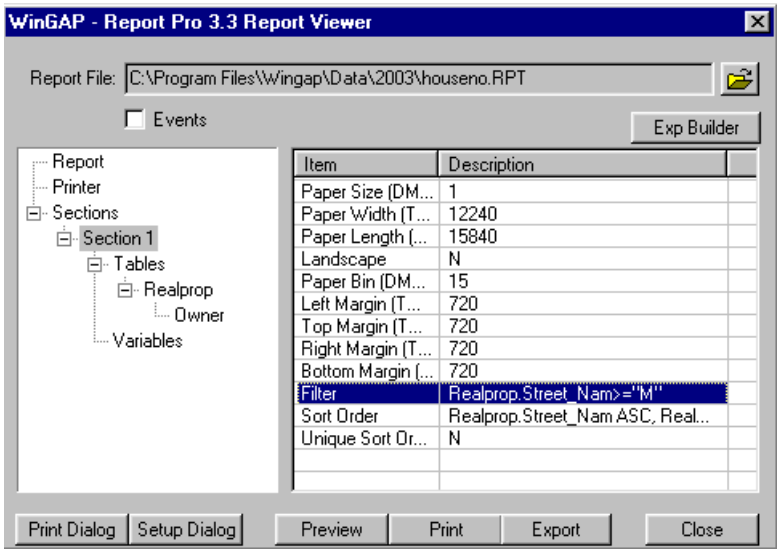
If the report contained any Variables, there would be a "+" sign to the left of the Variables heading. There is no "+" sign in this report, so the House Number and Street report uses two tables, Realprop and Owner, but no Variables. At this point the Realprop table may be clicked on to display its report components, which are displayed in the pane on the right side of the Report Viewer Form, as shown on the next page.



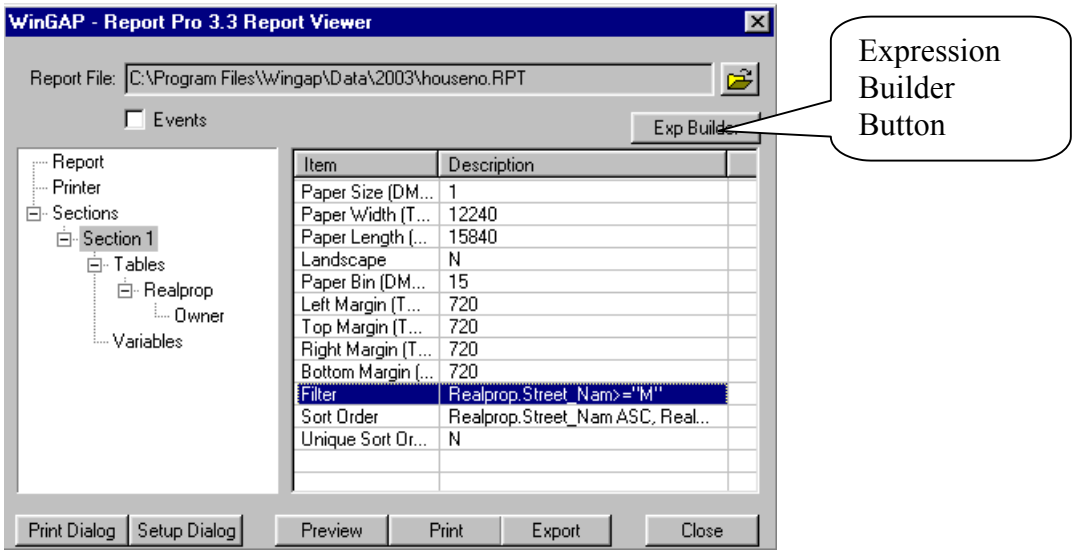
The location of the database and index files used with this report are shown, as well as any expressions. The user can click on the Owner table to display its report components.



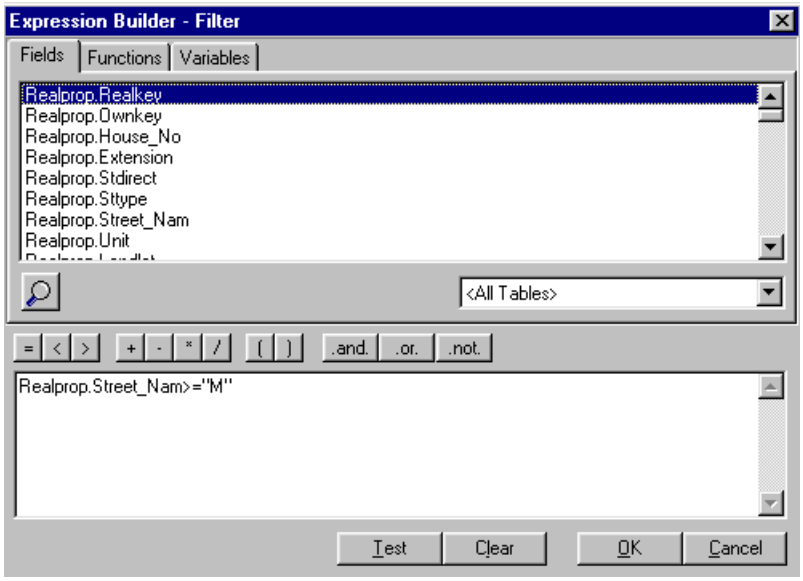
If a "filter", which would set conditions on how and what data is to be printed is used in the report, it can be seen by clicking on the Section 1 Heading, and then on the Filter Item in the right pane, as shown on the next page.



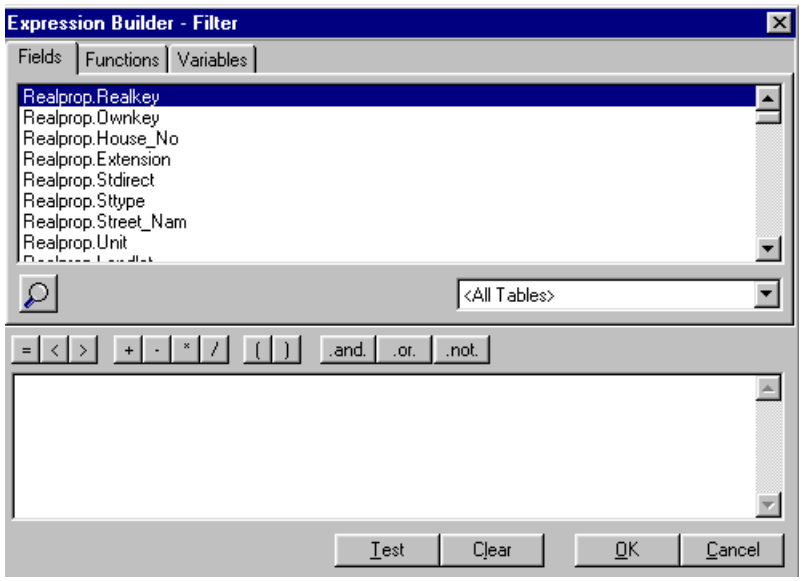
As can be seen above in the Filter item in the right window, the report is "filtered" to print all Street Names from "M" to the end of the alphabet. If desired, this filter can be modified by clicking on the Exp Builder Button on the upper right of the Report Viewer Form.



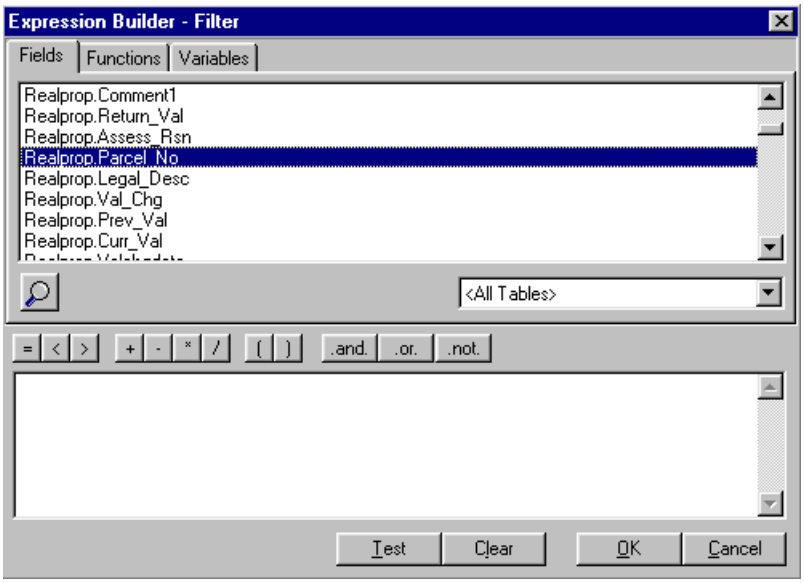
Clicking on the Exp Builder button will produce the Expression Builder window for the filter.



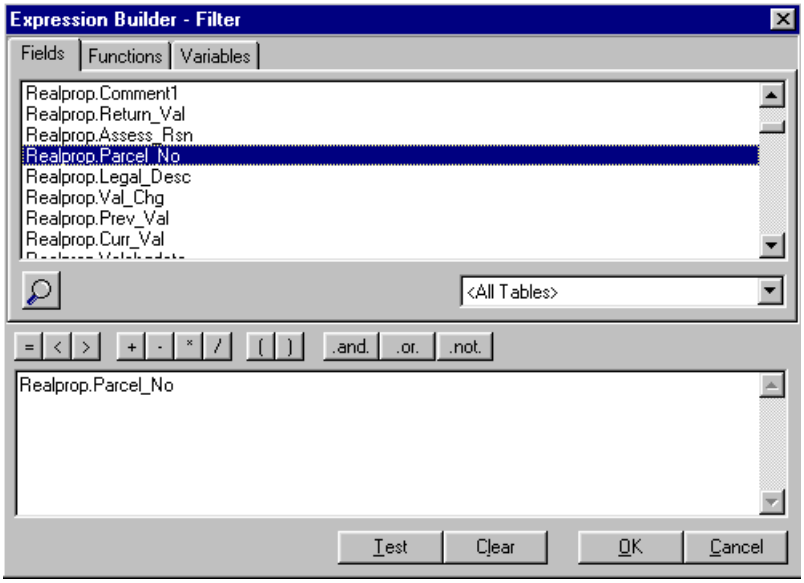
Detailed instructions on using the Expression Builder are found in the Report Designer section of this manual. For the purposes of this report example, the House Number and Street report is to modified to print only those Parcels that are in Map "001". The first thing the user should do in modifying the filter is to remove the existing filter by deleting it in the bottom window of the Expression Builder Form. One way this is done is by clicking with the Mouse to the left of the Realprop.Street_Nam>="M" expression and then pressing the Delete key to delete the entire expression, as shown below or the user can click the Clear button located on the bottom of the Expression Builder form.



The new filter is created by first finding the field that contains the Parcel Number in the upper window of the Expression Builder Form. The field is "Parcel_No", and is found in the Realprop database file, as shown on the next page.



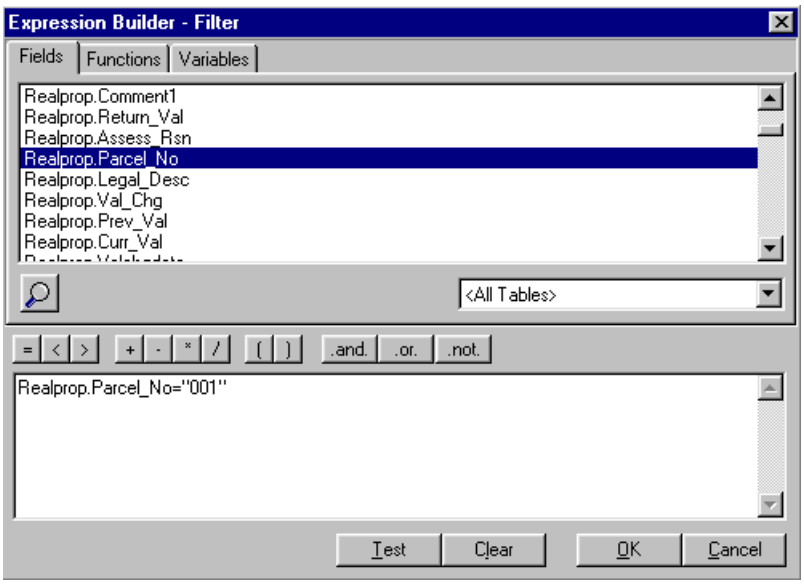
The user can double-click on the File/Field name to place it in the lower window on the Form.



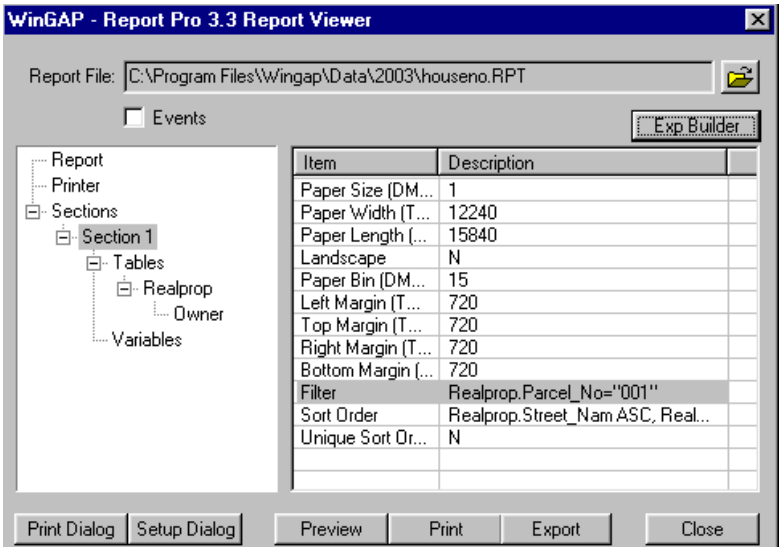
As mentioned above, the report example was for all Parcels in Map "001". The new filter is built by first clicking on the "=" sign, then keying in "001" to print only those Parcels in Map "001".

NOTE: the user will have to understand the County's Map and Parcel number structure to key this number in the filter correctly. This example assumes that the Map number is the FIRST three positions of the Map and Parcel number. Not all Counties' Map and Parcel numbers are configured in this manner.

When the new filter is built, it will appear as shown below.



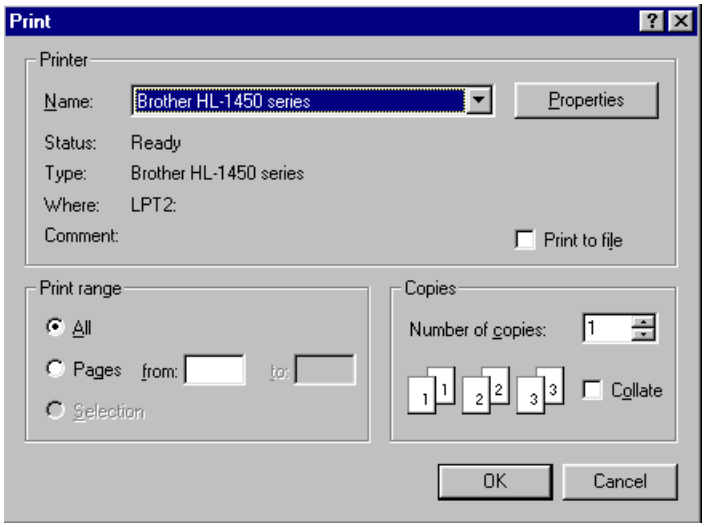
At this point the Test Button should be clicked to "test" the validity of the new expression. If it tests OK, the user can click the OK Button to return to the Report Viewer Form. If the new expression is invalid or in error, the user must correct it before proceeding. Once the user has built the new filter and is back on the Report Viewer Form, the new filter is displayed in the right window of the Form.



All operations on the Form are controlled from this point on by clicking on any of the Buttons at the bottom of the Report Viewer Form.

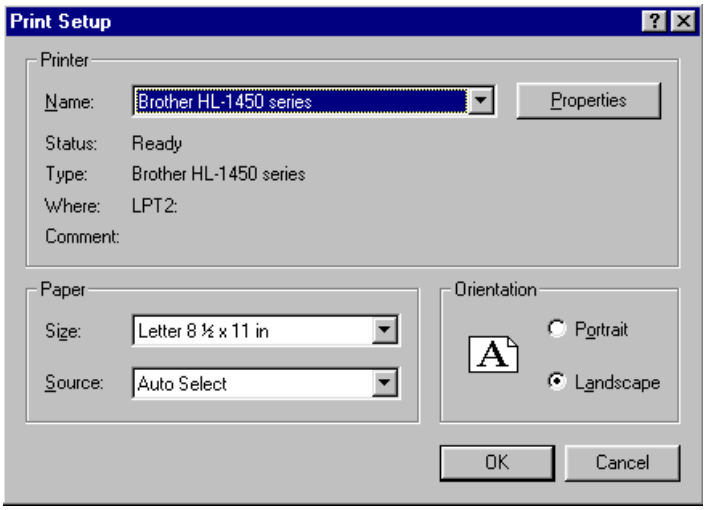
- **Print Dialog**

Printer settings such as page range and number of copies can be controlled by clicking the Print Dialog Button, which produces the Print window, with the default Windows printer visible in the Name combo box.



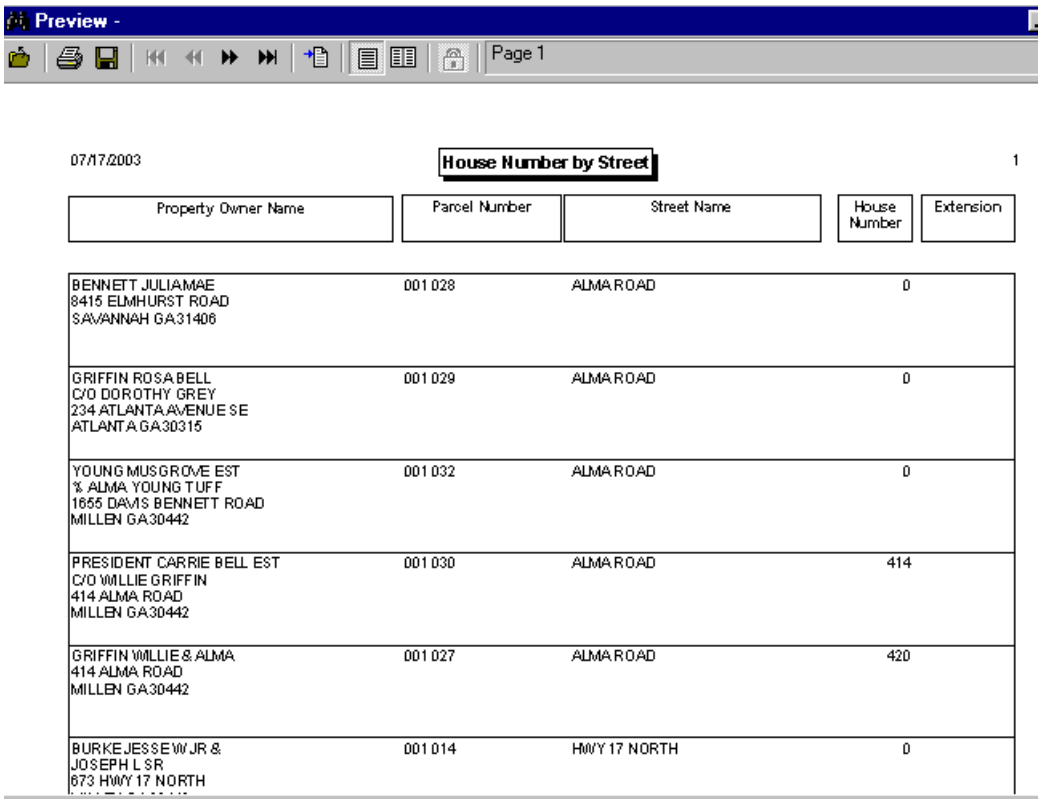
- **Setup Dialog**

Additional printer settings such as paper size and paper orientation can be controlled by clicking the Setup Dialog Button, which produces the Print Setup window, with the default Windows printer visible in the Name combo box.



- **Preview**

The new House and Street Number report, this time for those Parcels that are in Map "001", can be previewed by clicking the Preview Button, producing a preview of the report.



Property Owner Name	Parcel Number	Street Name	House Number	Extension
BENNETT JULIAMAE 8415 ELMHURST ROAD SAVANNAH GA31406	001 028	ALMA ROAD	0	
GRIFFIN ROSA BELL C/O DOROTHY GREY 234 ATLANTA AVENUE SE ATLANTA GA30315	001 029	ALMA ROAD	0	
YOUNG MUSGROVE EST % ALMA YOUNG TUFF 1655 DAVIS BENNETT ROAD MILLEN GA30442	001 032	ALMA ROAD	0	
PRESIDENT CARRIE BELL EST C/O WILLIE GRIFFIN 414 ALMA ROAD MILLEN GA30442	001 030	ALMA ROAD	414	
GRIFFIN WILLIE & ALMA 414 ALMA ROAD MILLEN GA30442	001 027	ALMA ROAD	420	
BURKE JESSE W JR & JOSEPH L SR 673 HWY 17 NORTH	001 014	HWY 17 NORTH	0	

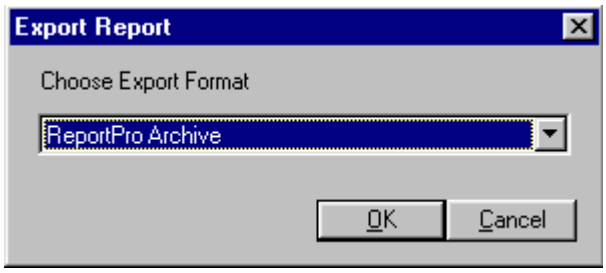
The report can be printed from the Preview window by clicking the Printer icon on the tool bar (second button from the left), or closed if the user wishes to return to the Report Viewer Form and make other changes to the report.

- **Print**

If the report is ready to print, it can be sent directly to the printer by clicking the Print Button. All pages in the report will be printed.

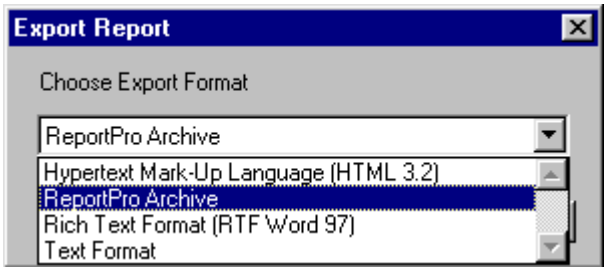
- **Export**

The report can be "Exported", or copied to a file, by clicking the Export Button. This will produce the Export Report Form.



The export format of the report is selected from the Choose Export Format combo box. There are four report Format types:

1. Report Pro Archive(the default), which can only be viewed in Report Pro.
2. HTML(Hypertext Mark-Up Language), which is viewed in a Web Browser, such as Internet Explorer.
3. Rich Text Format(known as RTF), which is viewed in a word processor such as Microsoft Word.
4. Text Format(a simpler form of Rich Text Format), which is also viewed in a word processor such as Microsoft Word.



The desired Format should be selected by clicking on the item, then the OK Button should be clicked to produce the Save As window, next page.

The user should note the location that the file will be saved in the Save In combo box and change this location if necessary. The name of the file that is about to be exported and saved is shown in the File name field and can be changed by the user if necessary. Clicking the Save Button will Export the file and return the user to the Report Viewer Form.

- **Close**

The Close Button will return the user to the main WinGAP screen.

WinGAP Statistics Module

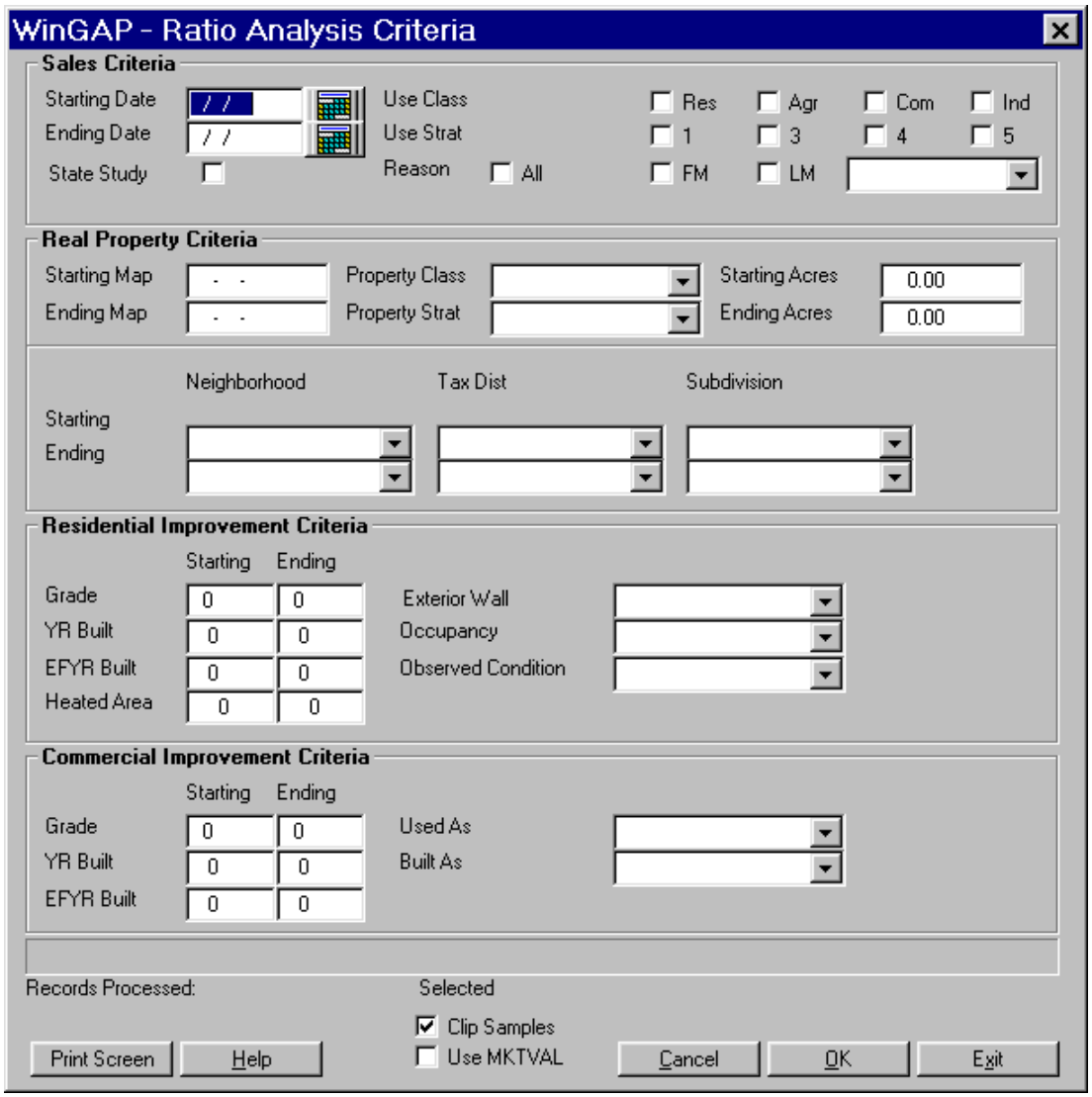
The Statistics Module Menu in WinGAP contains two options: 1) Sales Analysis, and 2) Market Comparison Study. Only the Sales Analysis option on the Statistics Menu is functional at the present time. The Sales Analysis option is used to run Sales Ratio Studies. Sales Ratio Studies are designed to assist Assessors' Offices with the analysis of sales. With this tool the appraiser can determine if the valuation of properties within a particular class, neighborhood, building type, tract size, etc. is being performed properly. The appraiser can readily identify if the correct proper assessment level has been established. The degree of uniformity can also be identified along with any valuation bias. These Sales Ratio Studies can provide much needed insight into digest acceptance.

There are three different methods for running Sales Ratio Studies within WinGAP. All three are reached by selecting the Statistics option on the WinGAP Menu Bar, then clicking on the Sales Analysis option. The Sales Analysis sub-menu has three options: Basic Selection, Advanced Query, and Neighborhood Analysis. The Basic Selection option will be covered first.

Basic Selection

Ratio Analysis Criteria Form

The Basic Selection option presents the Ratio Analysis Criteria Form, next page, where the user can select from a variety of pre-defined fields to run the Ratio Study. Each of these fields will be discussed in the order they appear on the Form.



Sales Criteria

Ratio Studies can be run based upon a variety of Sales Criteria. The fields in the Sales Criteria section of the Basic Selection Form use the information keyed on the Sales Form when adding sales to Real Property.

- Starting Date: The first field in the Sales Criteria section of the Form is where the Starting Date for sales to be used in the Ratio Study is keyed. The date keyed in this field is inclusive. For example, if the user wants a Study of all sales after January 1, 2002, then 01/02/2002 would be keyed in this field. The Starting Date field should be left blank if it is not to be used as a criteria in the Ratio Study.
- Ending Date: The next field is where the Ending Date for sales to be used in the Ratio Study is keyed in the same manner as the Starting Date. Like the Starting Date, the date keyed in the Ending Date field is inclusive. The Ending Date field should be left blank if it is not to be used as a criteria in the Ratio Study.
- State Study: The State Study checkbox field should be checked if the Ratio Study is to include only those sales that are marked "Y"(Yes) for State Audit Department use on the Sales Form.
- Use Class: Four checkboxes are available where the Sales Classification of the sale can be selected to further qualify the Ratio Study. Any or all of the checkboxes can be selected. If all of the Class checkboxes are left blank, the Sales Class will be ignored in the selection of sales.

- Use Strat: Four checkboxes are available where the Sales Stratification of the sale can be selected to further qualify the Ratio Study. Any or all of the checkboxes can be selected. If all of the Strat checkboxes are left blank, the Sales Strat will be ignored in the selection of sales.
- Reason: Three checkboxes and a combo box are available to set criteria for the Sale Reasons to be used for the Ratio Study. If the **All** checkbox is checked, all Sales will be used, regardless of Sale Reason, provided the sales meet the other criteria already keyed in the fields on the Ratio Analysis Criteria Form. If only the **FM** (Fair Market) checkbox is checked, only sales with a Sales Reason of Fair Market will be used. If only the **LM** (Land Market) checkbox is checked, only sales with a Sales Reason of Land Market will be used. If both the FM and LM checkboxes are checked, only sales with a Sales Reason of Fair Market or Land Market will be used. Finally, the Reason combo box can be used to run a Ratio Study for a specific type of Sale Reason.

Real Property Criteria

The criteria used to run a Ratio Study can be further narrowed by using a variety of Real Property Criteria. The fields in the Real Property Criteria section of the Ratio Analysis Criteria Form use information keyed on the Real Property General Information Form.

- Starting Map: The first field in the Real Property Criteria section of the Form is where a Starting Map/Parcel number for the Ratio Study, if desired, can be keyed. The Map number keyed in this field is inclusive. The Starting Map field should be left blank if it is not to be used as a criteria in the Ratio Study.
- Ending Map: The next field is where the Ending Map for sales to be used in the Ratio Study is keyed in the same manner as the Starting Map number. Like the Starting Map number, the Map/Parcel number keyed in the Ending Date field is inclusive. The Ending Map field should be left blank if it is not to be used as a criteria in the Ratio Study.
- Property Class: The Property Class combo box can be used to select a specific Digest Classification for the Ratio Study. If all sales regardless of Digest Classification are desired in the Study, the field should be left blank.
- Property Strat: The Property Strat combo box can be used to select a specific Digest Stratification for the Ratio Study. If all sales regardless of Digest Stratification are desired in the Study, the field should be left blank.
- Starting Acres: A specific minimum size for the sales used in the Ratio Study can be selected by keying a Starting Acre level in this field. The field should be left blank to include all sales regardless of tract size.
- Ending Acres: A specific maximum size for the sales used in the Ratio Study can be selected by keying an Ending Acre level in this field. The field should be left blank to include all sales regardless of tract size.
- Starting Neighborhood/Tax District/Subdivision: The Ratio Study can be further qualified if desired by using these combo boxes to select a specific Starting Neighborhood, Tax District, or Subdivision. These fields should be left blank to include all sales regardless of the Starting Neighborhood, Tax District, or Subdivision.
- Ending Neighborhood/Tax District/Subdivision: The Ratio Study can be further qualified if desired by using these combo boxes to select a specific Ending Neighborhood, Tax District, or Subdivision. These fields should be left blank to include all sales regardless of the Ending Neighborhood, Tax District, or Subdivision.

Residential Improvement Criteria

The criteria for Ratio Studies that include Residential Improvements can be further narrowed by using a variety of Residential Improvement Criteria. The fields in the Residential Improvement Criteria section of the Ratio Analysis Criteria Form use information keyed on the Residential Improvements Form.

- Grade: The first two fields in the Residential Improvement Criteria section of the Form are where a Starting and Ending Grade for Residential Improvements can be keyed. Any Grade keyed in these fields is inclusive. The Grade fields should be left blank if they are not to be used as criteria in the Ratio Study.

- YR Built: The YR Built fields are where a Starting and Ending Year Built for Residential improvements can be keyed. Any Year Built keyed in these fields is inclusive. The Year Built fields should be left blank if they are not to be used as a criteria in the Ratio Study.
- EFYR Built: The EFYR Built fields are where a Starting and Ending Effective Year Built for Residential Improvements can be keyed. Any Effective Year Built keyed in these fields is inclusive. The Effective Year Built fields should be left blank if they are not to be used as criteria in the Ratio Study.
- Heated Area: The Heated Area fields in the Residential Improvement Criteria section of the Form are where a Starting and Ending Heated Area for improvements can be keyed. Any Heated Area keyed in these fields is inclusive. The Heated Area fields should be left blank if they are not to be used as criteria in the Ratio Study.
- Exterior Wall: The Exterior Wall combo box can be used to select a specific type of Residential Improvement Exterior Wall for a Ratio Study. The Exterior Wall field should be left blank if it is not to be used as a criteria in the Ratio Study.
- Occupancy: The Occupancy combo box can be used to select a specific type of Residential Improvement Occupancy for a Ratio Study. The Occupancy field should be left blank if it is not to be used as a criteria in the Ratio Study.
- Observed Condition: The Observed Condition combo box can be used to select a specific type of Residential Improvement Observed Condition for a Ratio Study. The Observed Condition field should be left blank if it is not to be used as a criteria in the Ratio Study.

Commercial Improvement Criteria

The criteria for Ratio Studies that include Commercial Improvements can be further narrowed by using a variety of Commercial Improvement Criteria. The fields in the Commercial Improvement Criteria section of the Ratio Analysis Criteria Form use the information keyed on the Commercial Improvements Form.

- Grade: The first two fields in the Commercial Improvement Criteria section of the Form are where a Starting and Ending Grade for Commercial Improvements can be keyed. Any Grade keyed in these fields is inclusive. The Grade fields should be left blank if they are not to be used as criteria in the Ratio Study.
- YR Built: The YR Built fields are where a Starting and Ending Year Built for Commercial Improvements can be keyed. Any Year Built keyed in these fields is inclusive. The Year Built fields should be left blank if they are not to be used as criteria in the Ratio Study.
- EFYR Built: The EFYR Built fields are where a Starting and Ending Effective Year Built for Commercial Improvements can be keyed. Any Effective Year Built keyed in these fields is inclusive. The Effective Year Built fields should be left blank if they are not to be used as criteria in the Ratio Study.
- Used As: The Used As combo box can be used to select a specific type of Commercial Improvements Used As Code for a Ratio Study. The Used As field should be left blank if it is not to be used as a criteria in the Ratio Study.
- Built As: The Built As combo box can be used to select a specific type of Commercial Improvements Built As Code for a Ratio Study. The Built As field should be left blank if it is not to be used as a criteria in the Ratio Study.

After reviewing/changing any of the selection criteria for the Ratio Study, the OK button MUST be clicked to perform the Study. A horizontal yellow bar, followed by a red bar, will appear as WinGAP analyses sales based upon the selection criteria and calculates the sales ratios and other statistics that make up the Ratio Study. The number of Sales records that are processed (all Sales records) and selected (those that meet the criteria keyed on the Ratio Analysis Criteria Form) in the Ratio Study will display beneath the bar graphs. When this process is completed, WinGAP will produce the Sales Ratio Analysis Form, discussed below. If no sales are found that meet the selection criteria, WinGAP will display the message "No records found - please expand your search", and the user should expand the sales criteria in order to locate the desired sales.

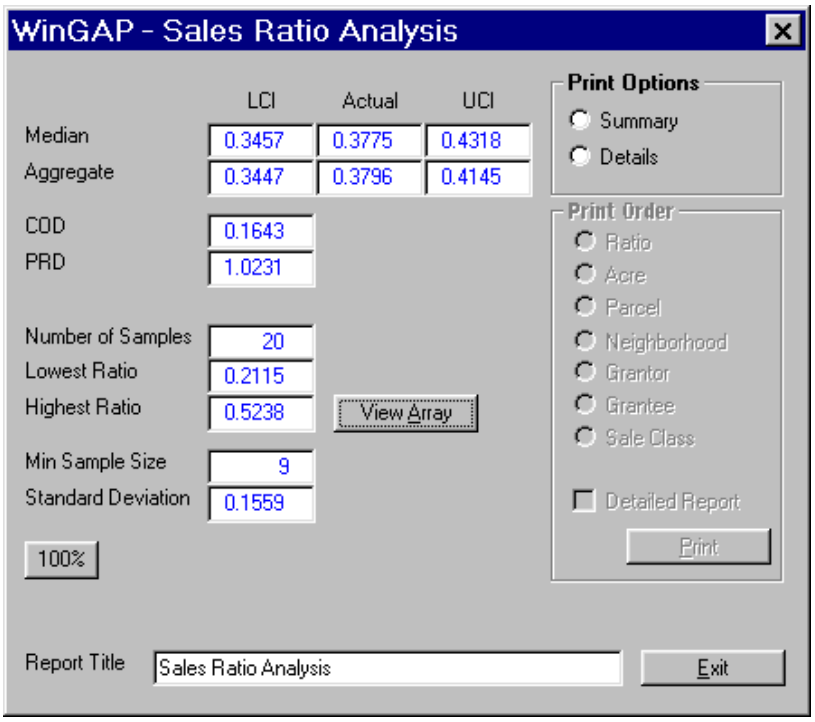
The **Cancel** or **Exit** buttons on the Ratio Analysis Criteria Form can be clicked to leave the Form. The **Print Screen** button can be clicked to print a hard copy of the Form showing the selected selection criteria, which can be attached to the printout of the Ratio Study (covered next).

The **Clip Samples** checkbox at the bottom of the Form allows the user to exclude or include sales with sales ratios outside the acceptable range of .10 to .70. If the Clip Samples checkbox is checked (the default), only sales with sales ratios between .10 and .70 will be included. If the Clip Samples checkbox is not checked, all sales, regardless of ratio, will be included.

The **Use MKTVAL** checkbox is provided to allow the appraiser to define whether the FMV entry on the sales screen should be used instead of the parcel's current value in determining the ratio. If the Use MKTVAL checkbox is checked and the FMV field on the Sales Information screen is greater than zero, the FMV value will be used for the ratio calculation.

Sales Ratio Analysis Form

Once the sales are analyzed and the sales ratios calculated, the Sales Ratio Analysis Form will appear, similar to the one below, superimposed over the Ratio Analysis Criteria Form. The Sales Ratio Analysis Form will display the sales ratios and other statistics and present the user with several options for printing the Ratio Study. The user can also look at a list of the sales that met the selection criteria and edit these sales if needed. Each of the fields and options of the Sales Ratio Analysis Form will be discussed in the order they appear on the Form.



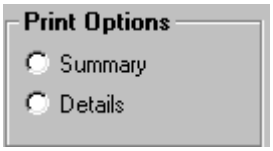
- Median LCI/Actual/UCI: The Median Actual Ratio is a measure of central tendency that indicates the midpoint of the array of the sales ratios. The Median Ratio is the statistic used to determine the level of assessment for the study. If the Median Ratio exceeds .44, the UCI (Upper Confidence Interval) Ratio can be used to see if digest acceptance is possible. The Upper Confidence Interval must be between .36 and .44 in this situation. The LCI (Lower Confidence Interval) is used in the same manner as the Upper Confidence Interval, except it will be used to determine digest acceptance if the Median Ratio is less than .36.

- Aggregate LCI/Actual/UCI: The Aggregate Actual Ratio is the weighted average of the sales. It is calculated by dividing the sum of the assessments by the sum of the sales prices. If the PRD (Price Related Differential, explained below) is outside of acceptable ranges and the Aggregate Ratio is used to determine the assessment level, the UCI (Upper Confidence Interval) Ratio must fall within a ratio range of .36 to .44 to allow for assessment level acceptance. If the PRD is out of range, the LC I(Lower Confidence Interval) is used in the same manner as the Upper Confidence Interval meaning that if the UCI is out of range, the LCI must fall within the acceptable range of .36 to .44 for assessment level acceptance. The table below provides an illustration of the use of the UCI and LCI.

LCI	AGG	UCI	
32	34	36	Pass (UCI falls within (overlaps) acceptable range)
28	30	32	Fails
26	32	38	Pass (UCI falls within (overlaps) acceptable range)

- COD: The COD, or Coefficient of Dispersion, measures the degree of uniformity in the study. The COD is calculated by first determining the absolute deviation from the median for each sale (Ratio-Median). The average of the deviations is then calculated. The average deviation is then divided by the median ratio to produce the COD. The COD should be less than .15 for residential property and less than .20 for agricultural, commercial, and industrial properties.
- PRD: The PRD, or Price Related Differential, is used to measure assessment bias in a ratio study. The PRD should fall between .95 and 1.10. It is calculated by dividing the mean ratio by the aggregate ratio. If the PRD is greater than 1.00, the lower priced properties generally have higher ratios than the higher priced properties. The study is exhibiting regressivity. If the PRD is less than 1.00, the higher priced properties are overvalued compared to the lower priced properties. The study exhibits progressivity
- Number of Samples: The number of Sales that met the selection criteria and are used in the Ratio Study.
- Lowest Ratio: The Lowest Ratio of any sale that meets the selection criteria and is used in the Ratio Study.
- Highest Ratio: The Highest Ratio of any sale that meets the selection criteria and is used in the Ratio Study.
- Min Sample Size: The smallest number of samples in a ratio study that will constitute a valid ratio study. The Min Sample Size is a function of the uniformity in the ratio study. A ratio study with greater uniformity has a lower Min Sample Size.
- Standard Deviation: The basic numeric measure of the extent of variation of the sample around the center (measure of central tendency).

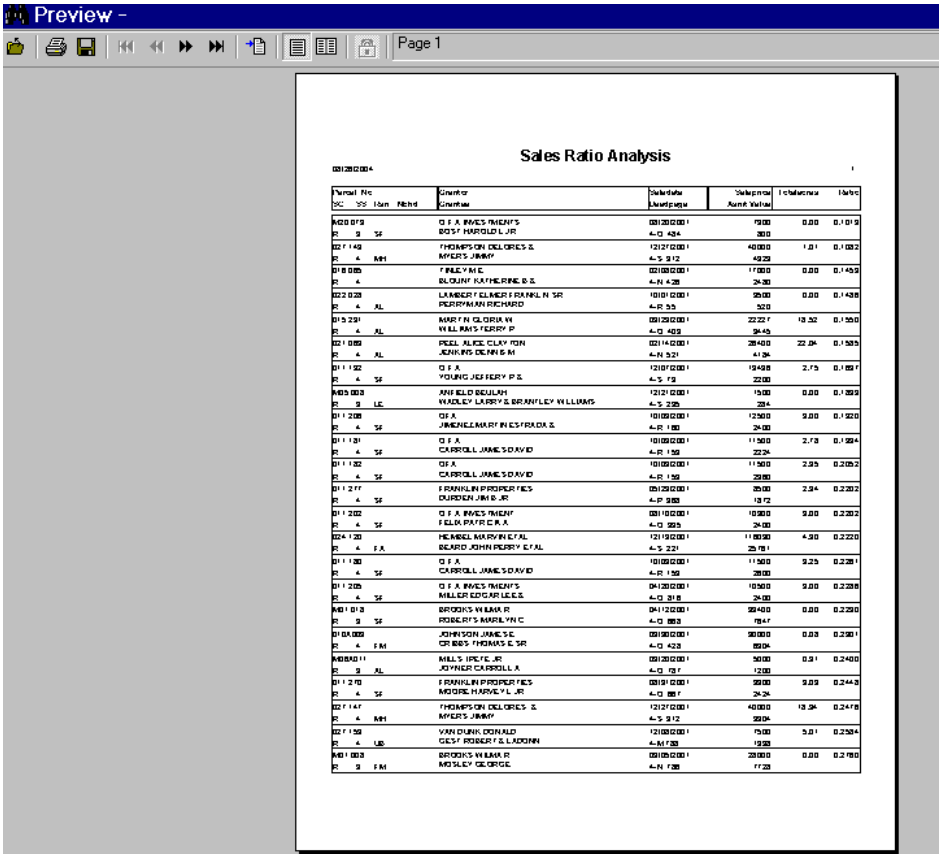
Print Options



The Sales Ratio Study is printed by selecting one of the options in the Print Options radio button section of the Sales Ratio Analysis Form. A Summary report of only the Sales Ratios statistics, with no individual sales, can be printed by clicking the **Summary** radio button, then the **Print** button. This will send a screen image of the Sales Ratio Analysis Form to the default Windows printer. If a detailed listing of the sales that make up the Sales Ratio Study is desired, the Detailed radio button should be clicked, which will provide access to the Print Order section of the Form, next page.

Print Order

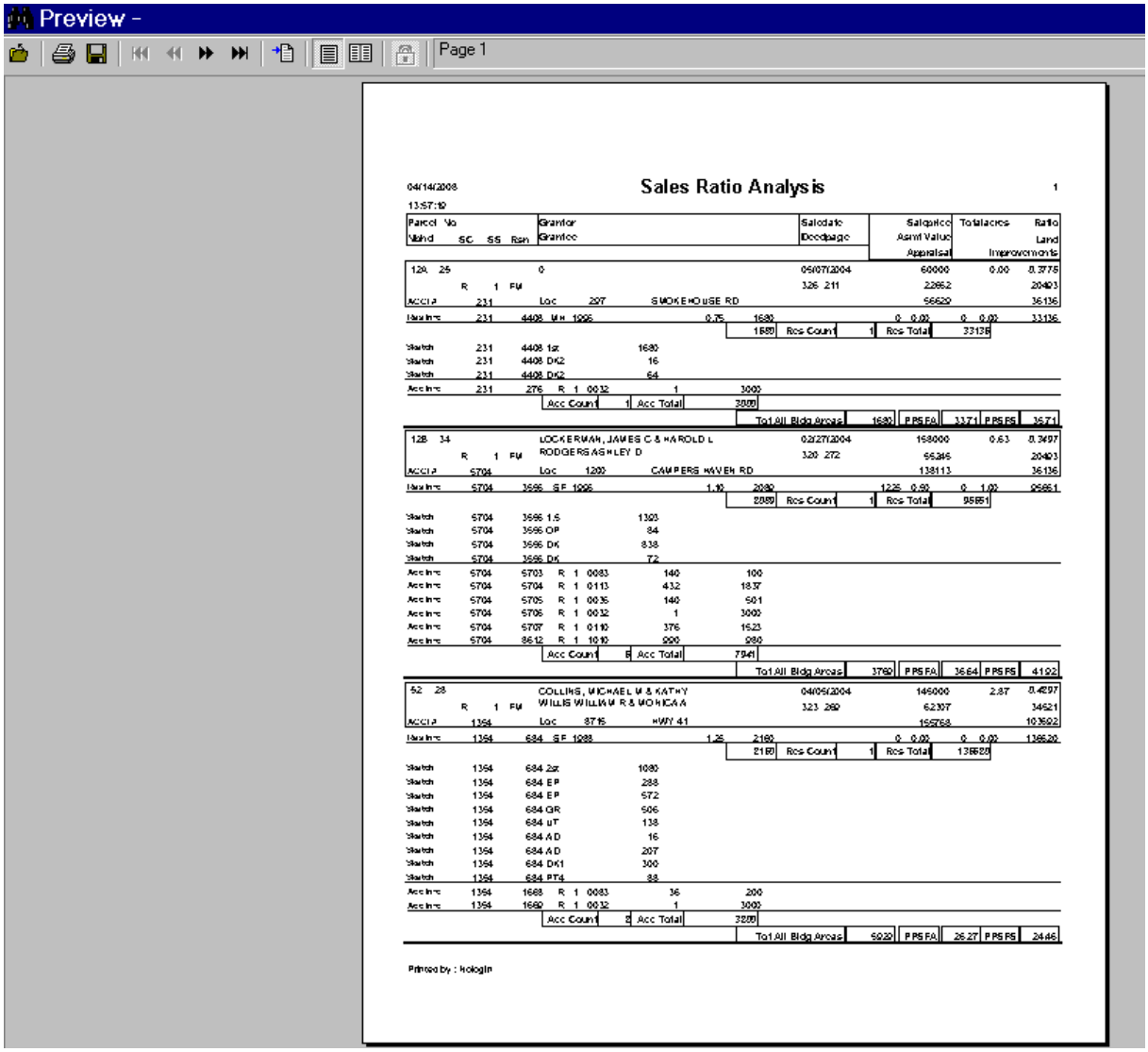
If the Detailed radio button in the Print Options section of the Form is clicked, the user can choose from seven available orders in which the Detailed Sales Ratio report can be printed, as shown above. These are Ratio, Acre, Parcel Number, Neighborhood, Grantor, Grantee, and Sale Class order. One of these must be selected, and then the Print button should be clicked. This will produce a Print Preview of the detailed report, as shown on the next page.



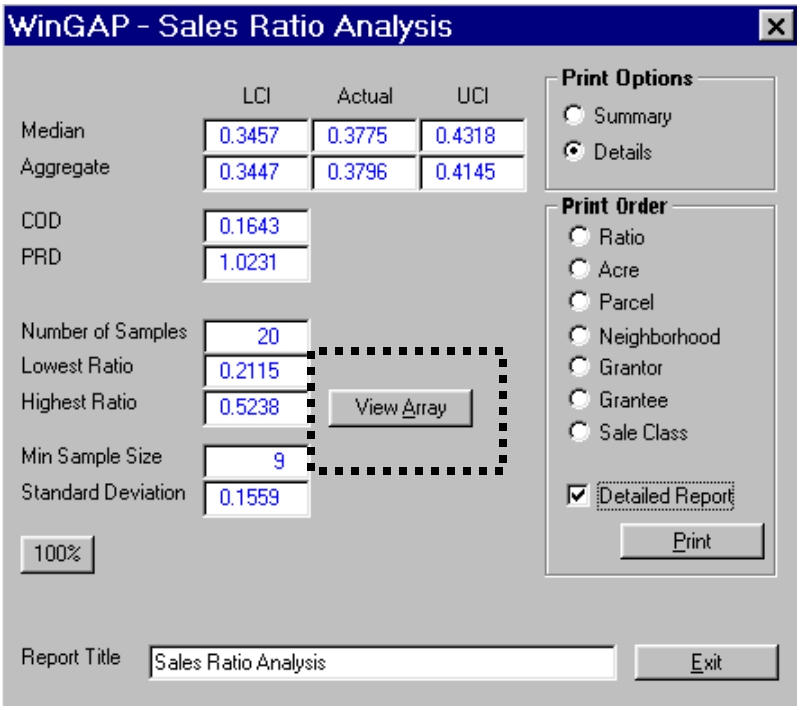
The Preview can be enlarged by putting the mouse pointer on the report and clicking with the left mouse button, and reduced in size by clicking the right mouse button. All of the sales that make up the Sales Ratio Study will be displayed. If the report is more than one page, the >> button at the top of the Preview page can be clicked to view additional pages. The last page will also show all of the Sales Ratios for the report. The report can be printed by clicking the printer button at the upper left of the Preview page. Once the report prints, the Preview page will disappear and the user will be returned to the Sales Ratio Analysis Form.

Detailed Report Checkbox

Additional information about the property for each sale can be obtained by clicking in the Detailed Report checkbox, above, prior to printing the Detailed Sales Ratio report. A print preview showing this additional information, such as the Residential Improvement, Accessory Improvements, etc., are listed for each sale.

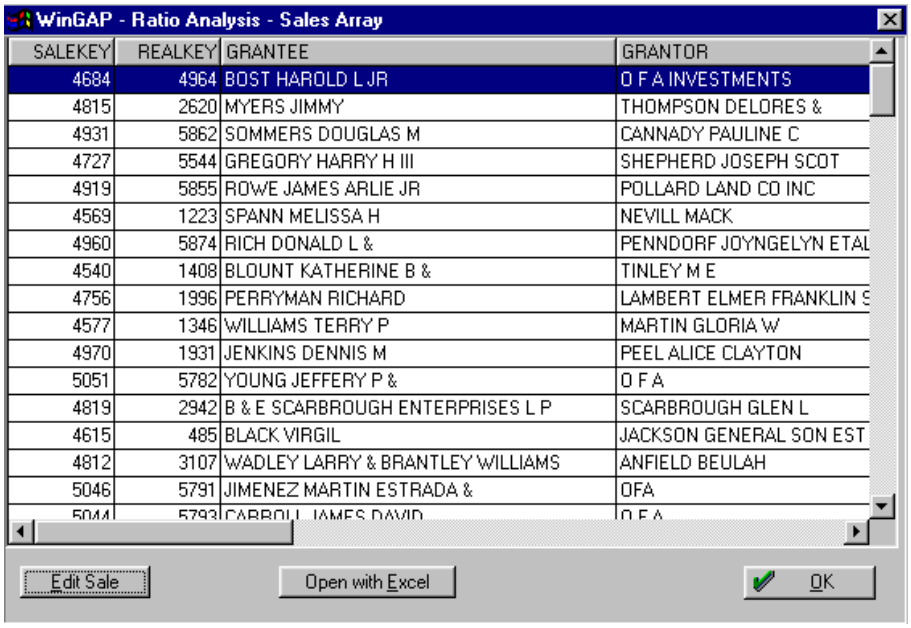


View Array Button

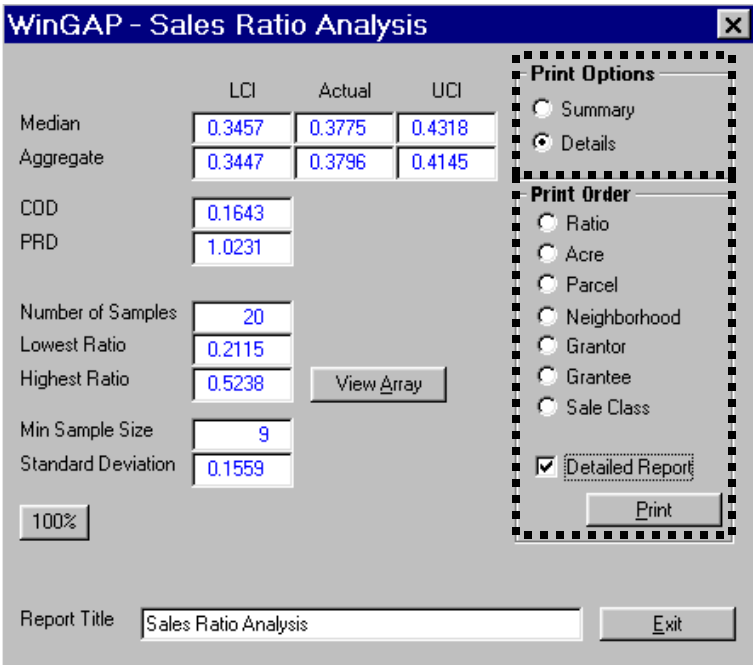


A listing of all sales that meet the selection criteria can be viewed, as shown below, by clicking the **View Array** Button, above, on the Sales Ratio Analysis Form. All of the information about each sale that met the selection criteria will display in the default sales ratio order on the Sales Array list box.

A sale can be edited by clicking on the desired sale and then clicking the **Edit Sale** button. The sales array can also be opened as an Excel spreadsheet by clicking the **Open with Excel** button. The spreadsheet will open as "read-only" but can be saved to another file name and manipulated by the user. The **OK** button should be clicked to leave the listing of sales and return to the Sales Ratio Analysis Form.



The user can change the order in the Sales Array AND the Excel spreadsheet from sales ratio order to any of the other available print orders by selecting the Details option in the Print Options radio button section, below, then selecting one of the Print Orders that become available,



100% Button

The ratio statistics that are displayed on the default Sales Ratio Analysis Form are based upon the 40% level of assessment. If the user wants to view these statistics at the 100% Fair Market Value of the property, the **100% Button** should be clicked. The 100% Button will change to 40%. The 40% Button can be clicked to again display the ratios at the 40% assessment level.

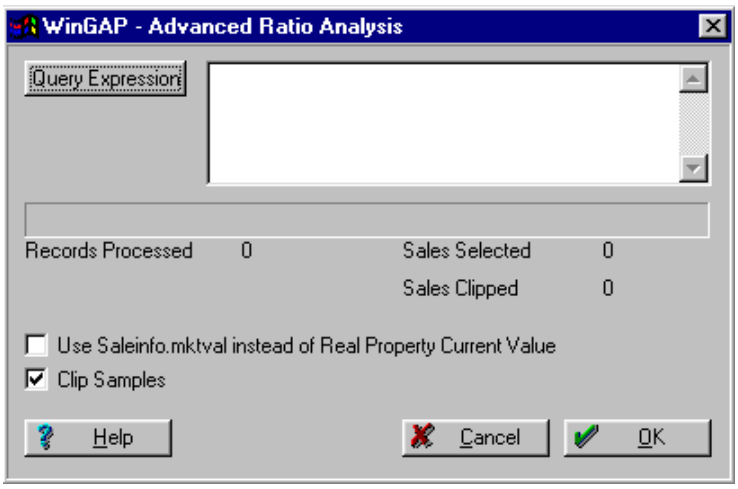
Once the work with this ratio study is completed, the OK button on the Sales Ratio Analysis Form should be clicked to return to the Ratio Analysis Criteria Form. Once all Basic Selection ratio study work is completed, the Exit button on the Ratio Analysis Criteria Form should be clicked to return to the main WinGAP screen.

NOTE: After running several Ratio Studies in succession (say five or more), it is best to leave the Statistics Module and then return in order to "refresh" the files used by the Statistics Module. This applies to Basic Selection, Advanced Query, and Neighborhood Analysis.

Advanced Query

The Advanced Query option on the Sales Analysis Menu, next page, provides a more flexible tool that the Assessors' Office can utilize in the generation of customized ratio studies. The Advanced Query will allow the Assessors' Office to incorporate any criteria that can be used in the analysis of sales into the sales analysis process.

Selecting this option presents the Advanced Ratio Analysis Form, below. This Form and the Expression Builder Form, explained later, will be used to construct what is called a Query Expression. The contents of the Query Expression will determine the manner in which the Sales Ratio Study will be run.



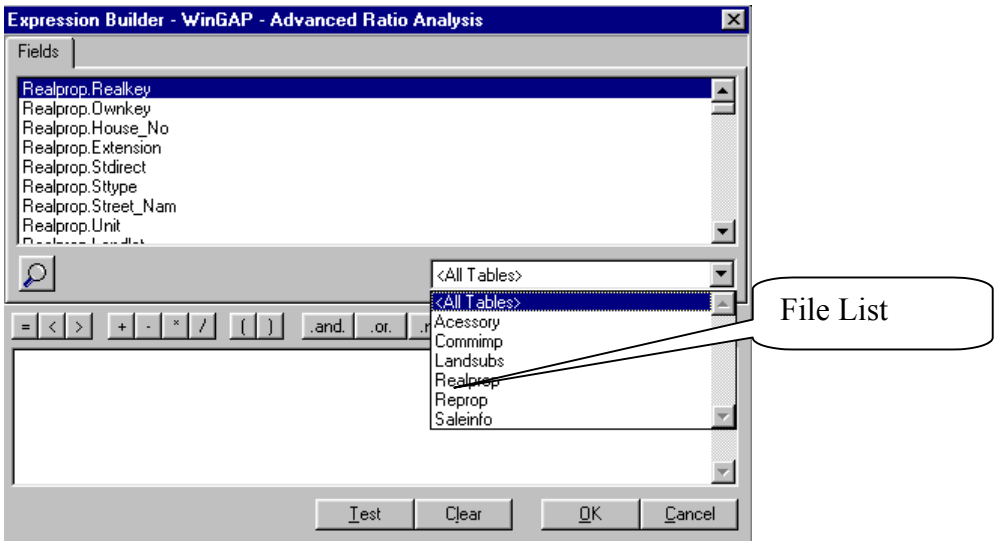
The Query Expression is constructed using at least one of six WinGAP database files, at least one of the data fields in one of the files, and at least one operator (explained below). Multiple files, fields, and operators can be used to construct more complex Query Expressions and produce more defined Sales Ratio Studies. All ratio studies use the Saleinfo database file, regardless of whether it is contained in the query or not, as it contains all of the sales applicable to a particular parcel. Most queries will link the Saleinfo file with at least one of the other five database files to qualify and further narrow the criteria for the ratio study.

In order to run ratio studies properly the user should have a basic understanding of the following:

1. what the purpose is of each of the six files used in running a Sales Ratio Study
2. what kind of data is contained in the fields found in each of the six files
3. which operators should be used to construct the query statement

A. The Six Sales Ratio Analysis Database Files

As seen on the Expression Builder Form, next page, six WinGAP Database files are used to run Sales Ratio Studies. The user can click on the combo box in the center of the Form to display the file list. These files are explained in detail on the next page.



1. SALEINFO.DBF

SALEINFO.DBF is the primary database file used in running ratios and contains sales information pertaining to parcels that are entered into WinGAP. Data such as grantee, grantor, deed book and page, saleprice, sale class, sale strata, and sale reason code are contained in this file.

2. ACESSORY.DBF

All of the data about every accessory building in the county is contained in the ACESSORY.DBF file. Such information as length, width, square feet, grade, and accessory improvement value is stored here.

3. COMMIMP.DBF

The primary commercial improvement database, COMMIMP.DBF contains data for each commercial improvement such as digest class and strat, used as and built as codes, square footage, and total commercial improvement value.

4. LANDSUBS.DBF

Landsubs.dbf contains the land subrecords for all types of urban and rural land in WinGAP. Subrecord data such as front feet, acres, land type, subrecord influence, and subdivision code are contained in this file.

5. REALPROP.DBF

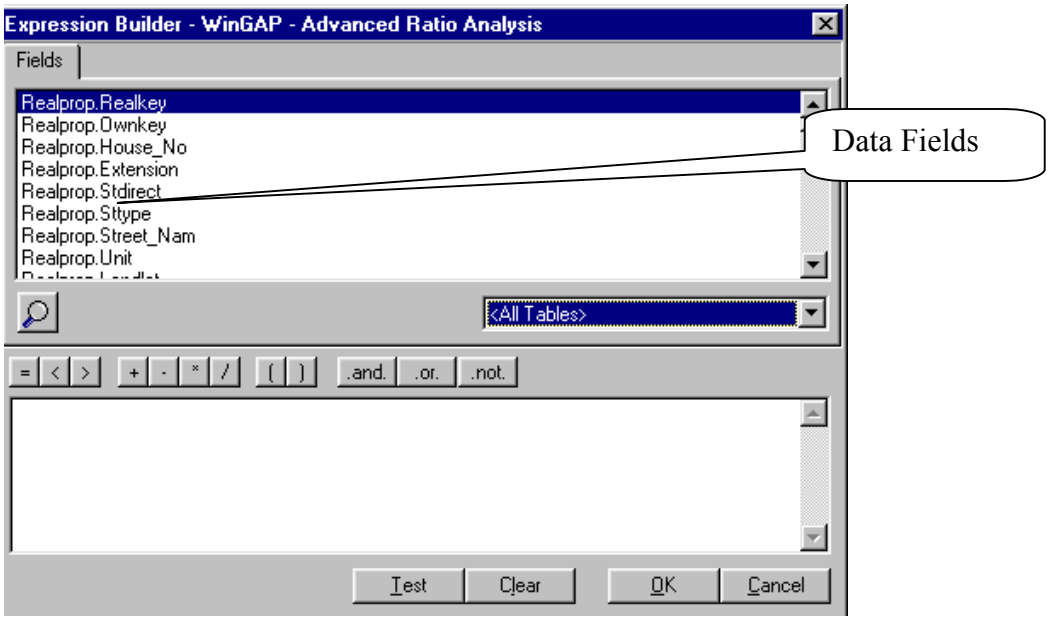
Every parcel entered in WinGAP will have a record in this file. This file contains the parcel number, total current and previous parcel value, digest classification and stratification, and taxing district, etc.

6. REPROP.DBF

The primary residential improvement database file, REPROP.DBF contains information such as exterior wall type, square feet, total heated area, grade, heating type, plumbing, and total improvement value.

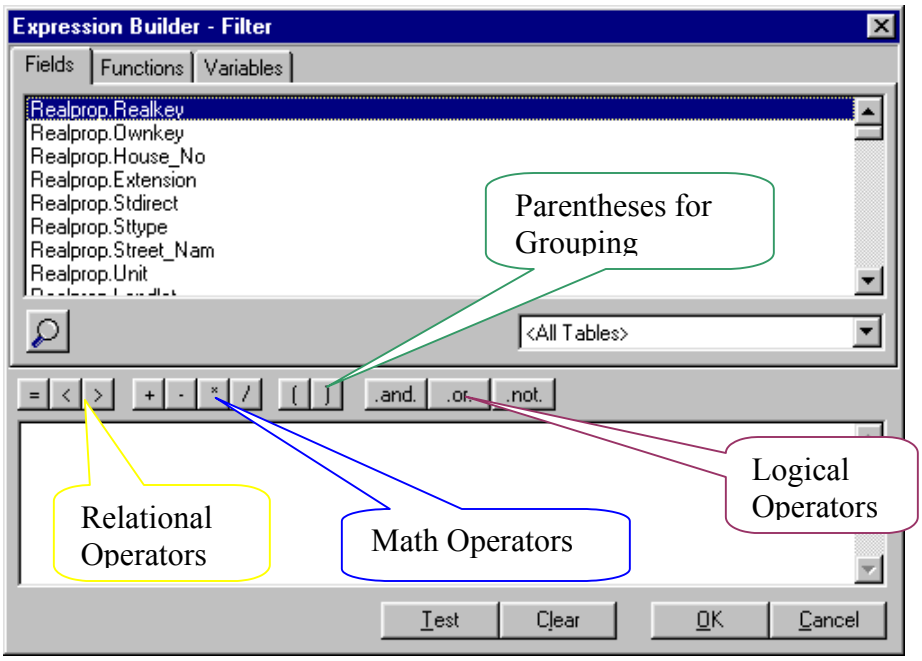
B. Data Fields

Each of the six database files used to run Sales Ratio Studies have a number of fields that contain specific kinds of data that can be used to qualify the Query Expression. The number, type, and purpose of each field varies from file to file. For instance, REALPROP.DBF would be used if the ratio study used parcel acreage as a qualifier; LANDSUBS.DBF would be used if land type was needed as a qualifier. REPROP.DBF would be used if grade or structure value for residential buildings was a qualifier; COMMIMP.DBF would be used if grade or structure value for commercial buildings was needed. On the Expression Builder Form, as seen below, the field names are displayed in the top window on the Form, to the right of the file name, separated by a period.

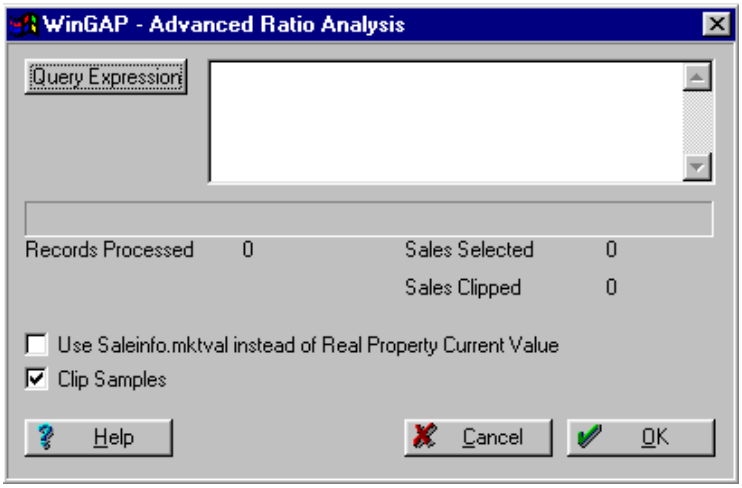


C. Operators

Operators, as shown on the Expression Builder Form, next page, are used to compare field values in database files with qualifying data **and** to link multiple expressions. Three types of operators are used in the Analysis module. **Relational** operators such as **=** (equal to), **>** (greater than), **<** (less than), and **<>** (not equal to) are used to compare a field value with the qualifying data. **Mathematical** operators such as + (plus), - (minus), * (multiply), and **/** (divide) are used to perform mathematical operations. When data in one file or more than one file is combined in a query statement they are linked by a **Logical** operator. The two logical operators are **AND** and **OR**. **AND** is used to join two or more logical expressions and generate a single result. For the result to be true, each of the logical expressions must be true. **OR** also joins two or more logical expressions, but only one of these must be true in order to obtain a single result. Also, parentheses are sometimes used to "group" expressions or parts of an expression.



As mentioned earlier, clicking on the Statistics>Sales Analysis>Advanced Query menu option produces the Advanced Ratio Analysis Form, below.



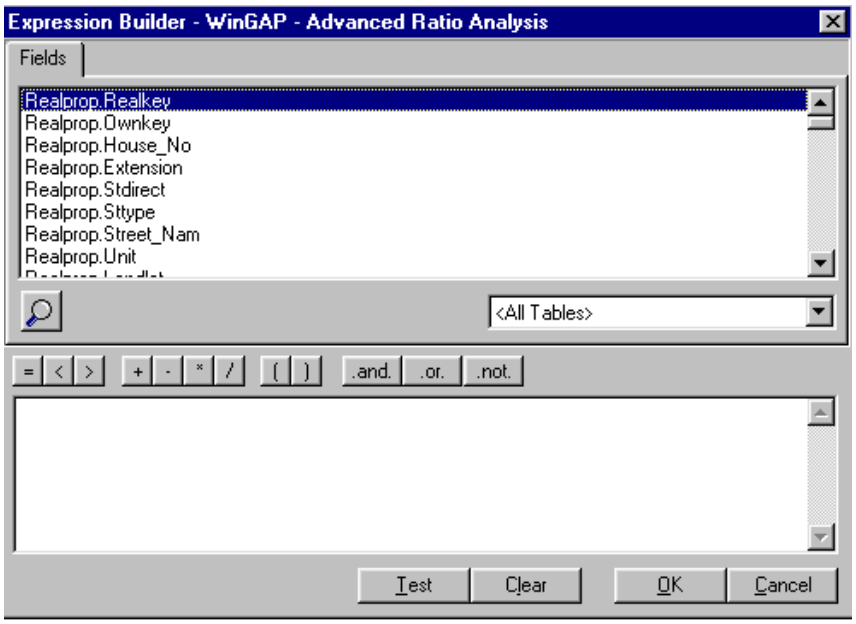
The Form contains a window in which the finished Query Expression will be displayed after it is constructed. Two checkboxes on the lower left of the Form allow the user to further define how the Sales Ratio Study is run. Placing a checkmark in the Use Saleinfo.mktval instead of Real Property Current Value checkbox allows the use if the Fair Market Value as entered on the Sales screen instead of the Current Value as calculated by WinGAP. The Clip Samples checkbox, which is checked by default, allows the exclusion of sales with ratios outside of a range of .10 to .70. Removing the checkmark means that all sales that meet the Query Expression conditions will be used, regardless of ratio.

When the user clicks on the OK Button, a bar graph will appear in the center of the form and the number of Records (parcels) Processed, the number of Sales Selected for the ratio study, and the number of Sales Clipped, or excluded, will be displayed, prior to the user being taken to the Sales Ratio Analysis Form. Before clicking the OK button, the user must first construct a Query Expression.

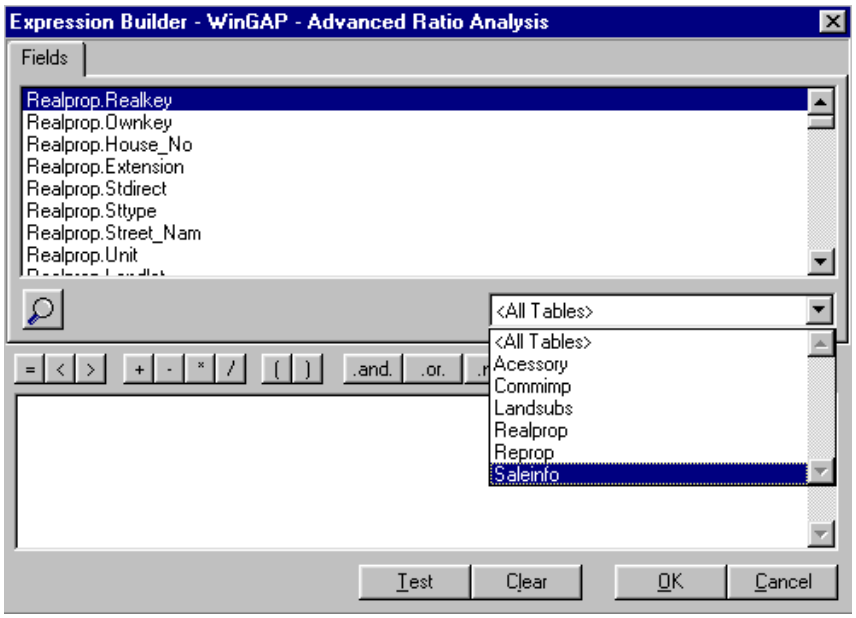
The instructions below will show the user how to construct several Query Expressions that can be used in the Assessors Office to analyze sales. A simple query will be looked at first, followed by more complex ones. The Advanced Query screens as they appear in WinGAP as the user builds the Query Expression will be shown for each example.

Example One: A study of all Residential Sales

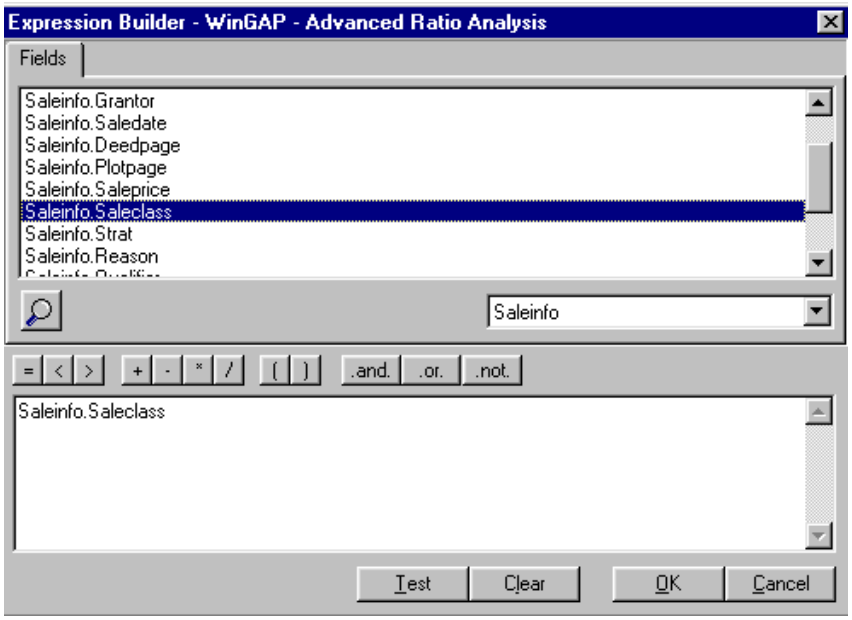
As mentioned earlier, the first step in running a Sales Ratio Study using the Advanced Query method is to build the Query Expression. To construct the Query Expression, the user must click the Query Expression Button on the top left of the Advanced Ratio Analysis Form, which produces the Expression Builder Form, below. **NOTE:** The speed of the Advanced Query is enhanced if Saleinfo is the first file chosen for selection criteria.



The top window of the Expression Builder Form contains the file and field names of the six WinGAP databases that are used in running sales ratios. Since the file/field listing can be somewhat long when all six files are displayed, the user can limit the list to one file by clicking on the combo box <All Tables> below the top window and selecting the desired file, which in this example is Saleinfo, as shown on the next page.

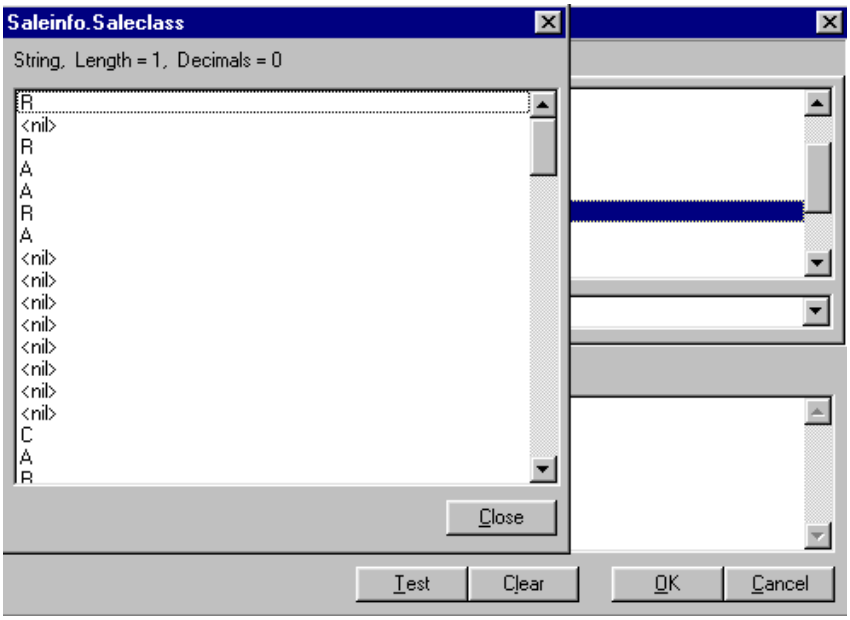


The Saleinfo database file is used in this example because the ratio study called for only Residential Sales, and the sales classification is contained in the Saleclass field within the Saleinfo database file. So the user should select the Saleinfo file in the combo box, and then double click on the Saleinfo.saleclass field in the top window of the Form to select this file and field and place it in the bottom window of the Expression Builder Form, as shown below.

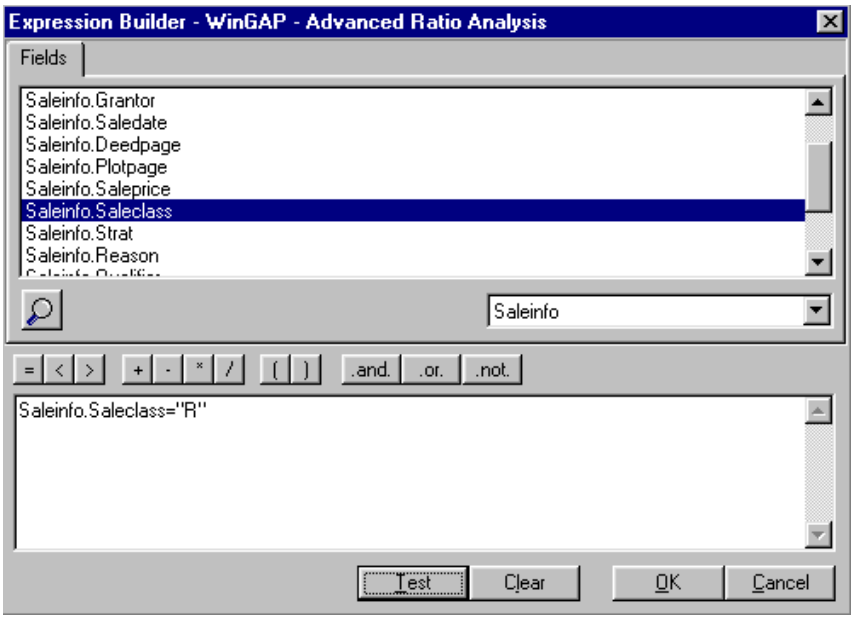


Once the File and field appear in the bottom window of the Expression Builder Form, the condition(s) for the ratio study are set. The condition in this example is for all Residential sales. The user should click the "=" button, then key an "R" (R is the Sales Classification for Residential Sales) to the right of the equal sign to set the condition. The " " are called delimiters and are used with character (also called "String") fields.

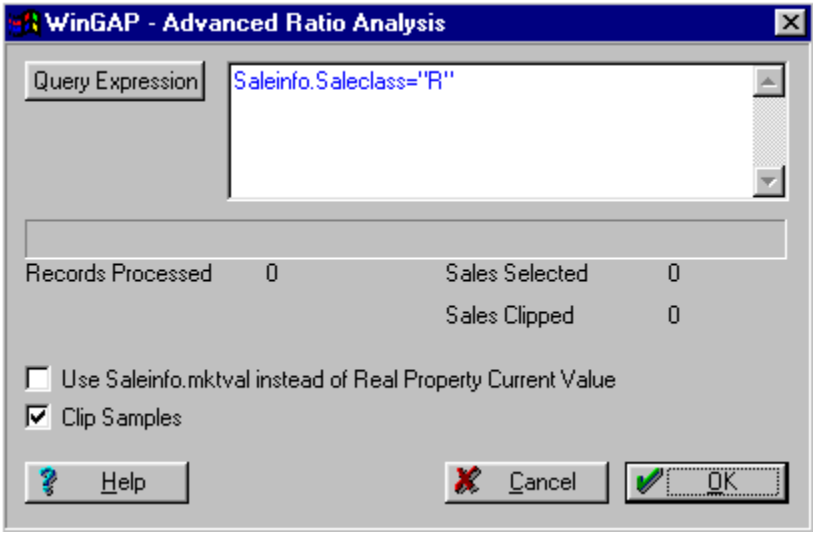
When the user is not sure of the data type characteristics of the field they are about to use, the magnifying glass button, as seen below, which is located to the left and below the top window on the Form, can be clicked to display additional information about the field, also shown below, in this case for the Saleinfo.Saleclass field.



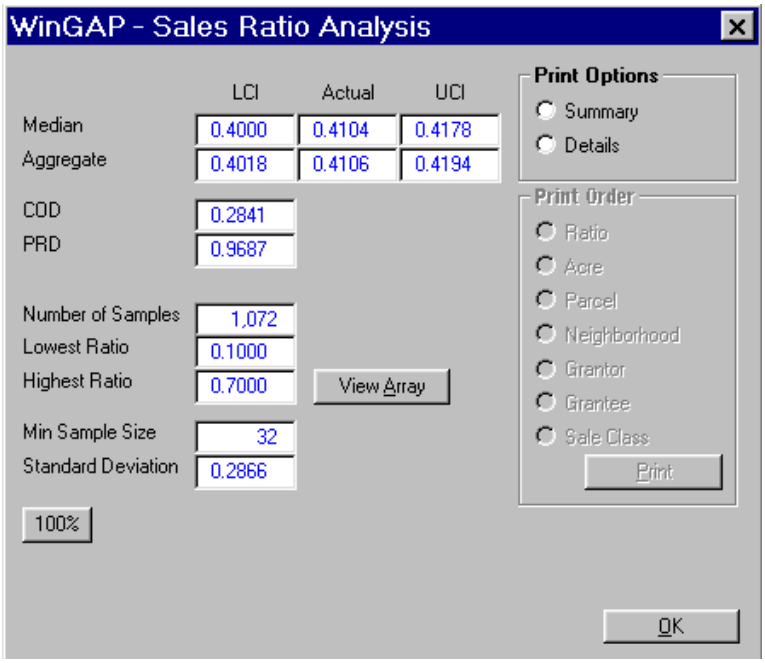
Once the Query Expression is built, it will appear on the Expression Builder Form as seen below.



The Test Button should be clicked to "test" the Query Expression. If the Query Expression is valid, the OK button on the Expression Builder Form is clicked to return to the Advanced Ratio Analysis Form, as seen below. If the user receives an error message after clicking the Test Button, the Query Expression must be corrected and again tested before leaving the Expression Builder Form and running the Sales Ratio Study.



The Query Expression that was just created will appear in blue in the window on the Advanced Ratio Analysis Form. **NOTE: Even though the user has access to the text in the box to the right of the Query Expression button, the expression should only be modified after clicking the button, Query Expression. Modifications made in the box above will produce erroneous results.** The user can now click the OK Button to run the Sales Ratio Study for all Residential Sales. Once the sales are analyzed and the sales ratios calculated, the Sales Ratio Analysis Form will appear, similar to the one shown below.

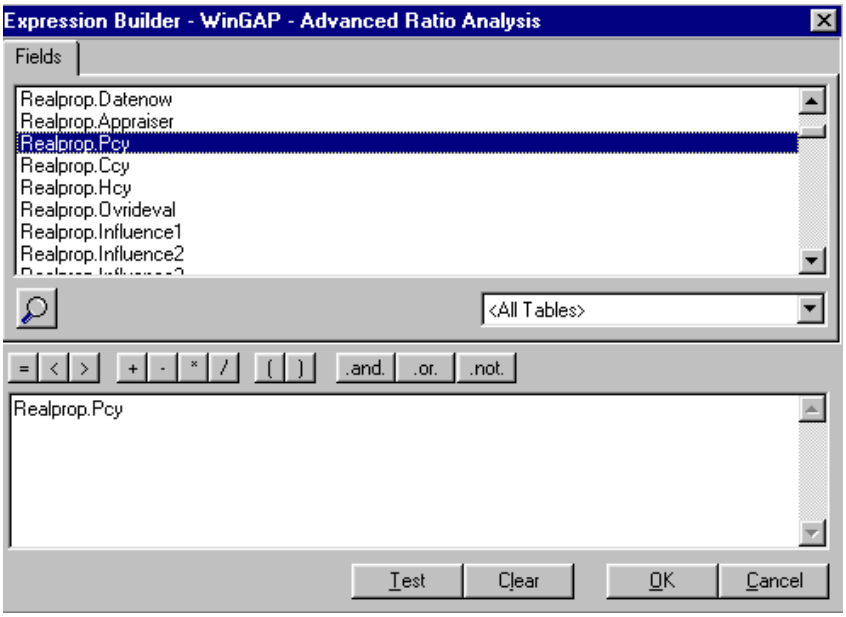


The Sales Ratio Analysis Form will display the sales ratios and other statistics and present the user with several options for printing the Ratio Study. The user can also look at a list of the sales that met the selection criteria and edit these sales if needed. The Sales Ratio Analysis Form was discussed under Basic Selection, earlier in this manual, and the user can refer to those pages for more information if desired.

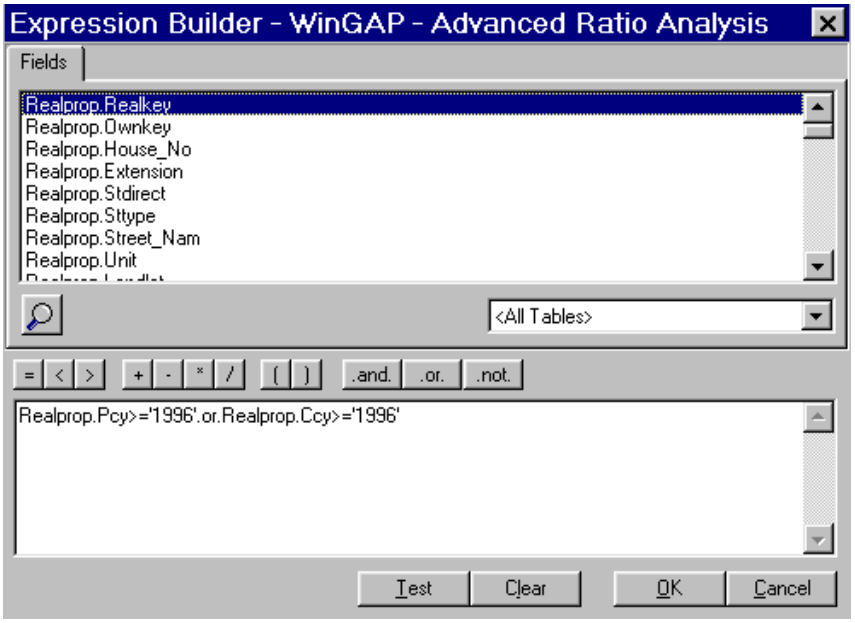
Example Two: a study of all sales for parcels that are under a Conservation Use or Preferential Assessment Covenant.

Parcels that are under a Conservation Use or Preferential Assessment covenant will have a beginning covenant year keyed in either the Pref YR field or the CUV YR field on the Real Property General Information Form. These fields are found in the Realprop database file. To run a Sales Ratio Study for parcels that are under currently under a covenant, and the appraisal year is 2005, the date keyed in either the Pref YR or CUV YR field needs to be no more than 10 years PRIOR to the current appraisal year (2005), which would be the year 1996. And to use both that year and all years after 1996, the ">=" (greater than or equal to) operator should be used. The logical "or" operator will also be used in the expression to link the Pcy and Ccy fields. As previously mentioned, the speed of the process is greatly enhanced if a criteria from Saleinfo is used. In situations where Saleinfo data is not critical to the results of the query, the user can use a criteria as basic as year(saleinfo.saledate) > 1800.

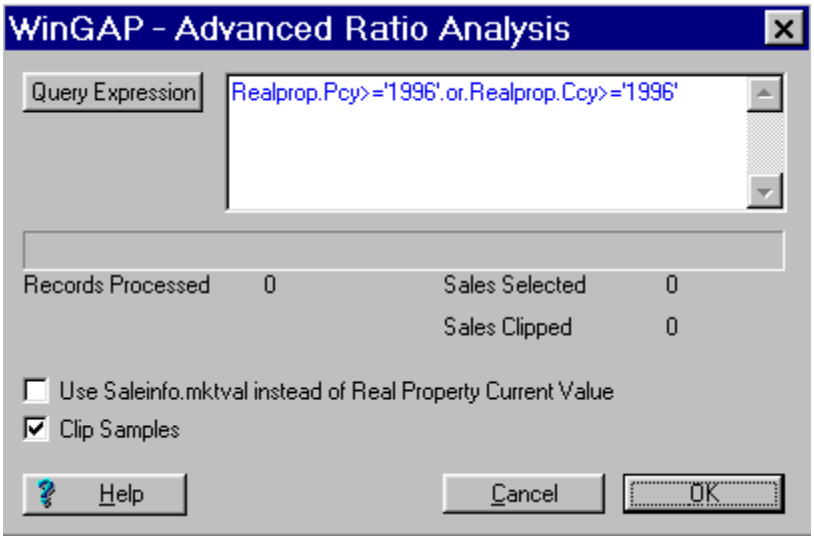
Once on the Expression Builder Form, the user should locate the Realprop database, and then the field that contains the Preferential Assessment Year, which is Pcy, and double click on it as shown below.



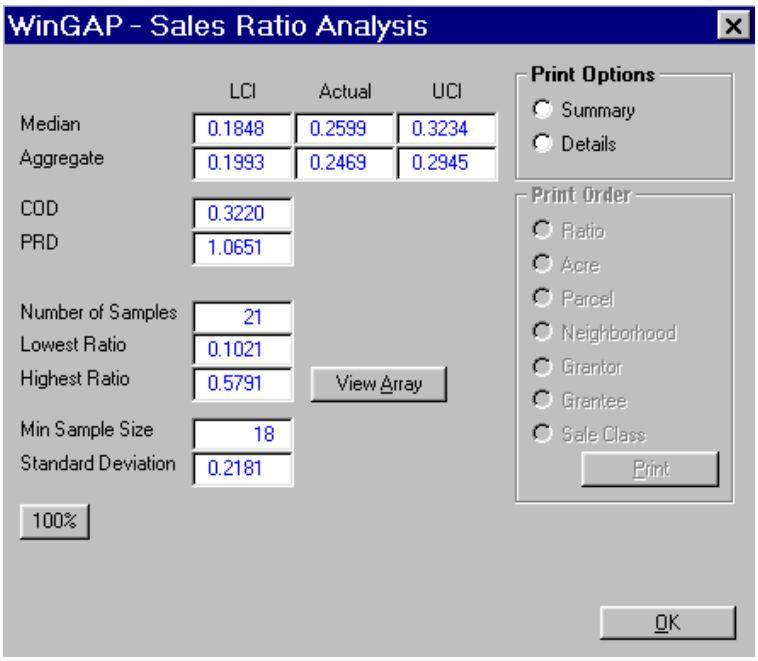
The user should click the ">" button, then the "=" button, and then key "1996" to the right of the greater than sign to set the condition. The "1996" is delimited because the PCY field in Realprop is a character field. Next, the condition must also be set for those parcels under Conservation Use. The OR operator is used to link the Preferential and Conservation Use year conditions, as either one can be true for this example. After clicking the OR operator, the user should double click on the Ccy field, then the greater than sign, then the "=" sign, and then key "1996" again. When the user has finished constructing the Query Expression, it should appear similar to the example shown on the next page.



The Test Button should be clicked to "test" the Query Expression. If the Query Expression is valid, the OK button is clicked to return to the Advanced Ratio Analysis Form, where the Query Expression will appear in the window on the Form, as seen below.



The user can now click the OK Button to run the Sales Ratios Study for all sales for parcels under a Preferential or Conservation Use covenant. Once the sales are analyzed and the sales ratios calculated, the Sales Ratio Analysis Form will appear, similar to the shown on the next page.



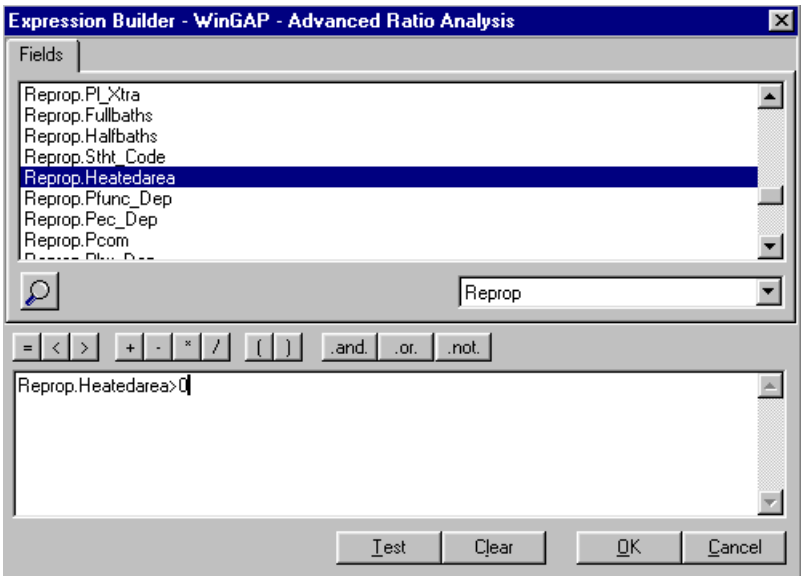
The Sales Ratio Analysis Form will display the sales ratios and other statistics and present the user with several options for printing the Ratio Study. The user can also look at a list of the sales that met the selection criteria and edit these sales if needed. The Sales Ratio Analysis Form was discussed under Basic Selection, earlier in this manual, and the user can refer to those pages for more information if desired.

Example Three: a study of all sales for houses that have a square foot value less than $30 / Square Foot.

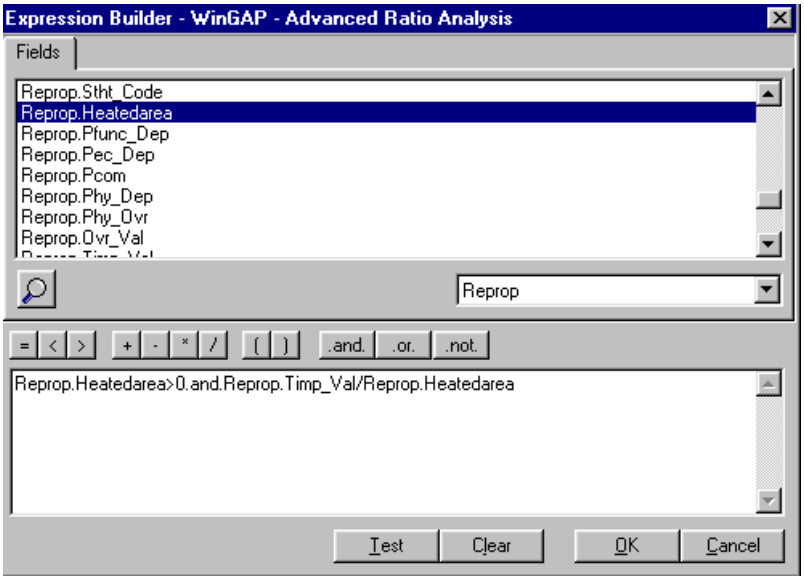
Data on houses in WinGAP is found in the Reprop database file. The $ / square foot value of a house is calculated by taking the calculated value of the house, found in the Timp_val field, and dividing this value by the square footage of the house, found in the heatedarea field. The user will need to employ four operators in this Query Expression:

1) the relational ">" (greater than) operator;
2) the logical "and" operator;
3) the mathematical "/" (divide) operator; and
4) the relational "<" (less than) operator.

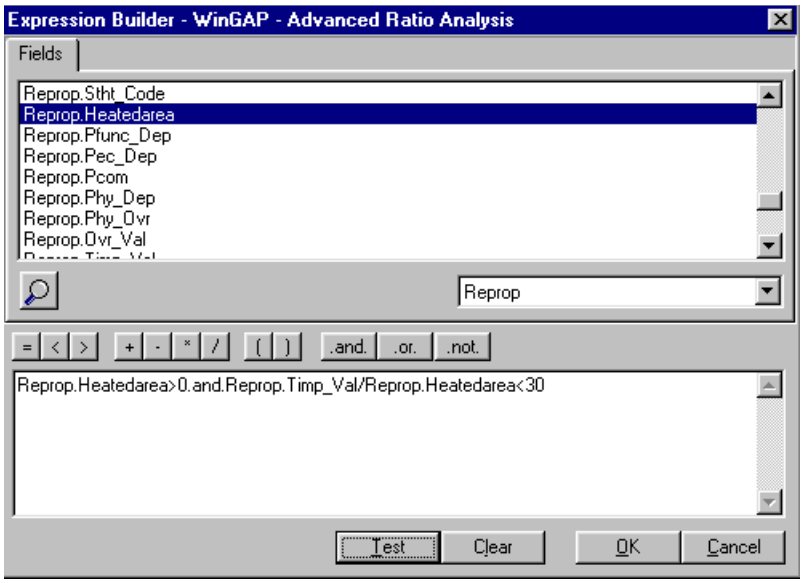
Once on the Expression Builder Form, the user should locate the Reprop database, and then the field that contains the square footage of the house, which is Heatedarea, and double click on this field to place it in the lower window on the Expression Builder Form. Since division by zero is not allowed in any Query Expression, a condition must first be set to prevent the Query Expression from using any Heatedarea values of zero. This is done by clicking the ">" (greater than) operator and placing it after the Heatedarea field in the expression, followed by a "0" (zero), as shown on the next page.



This condition must now be linked with the expression that will produce only those houses with a $ / square foot value less than $30. The logical "and" operator is used to link the expressions, followed by the Timp_val / Heatedarea calculation, as shown below.

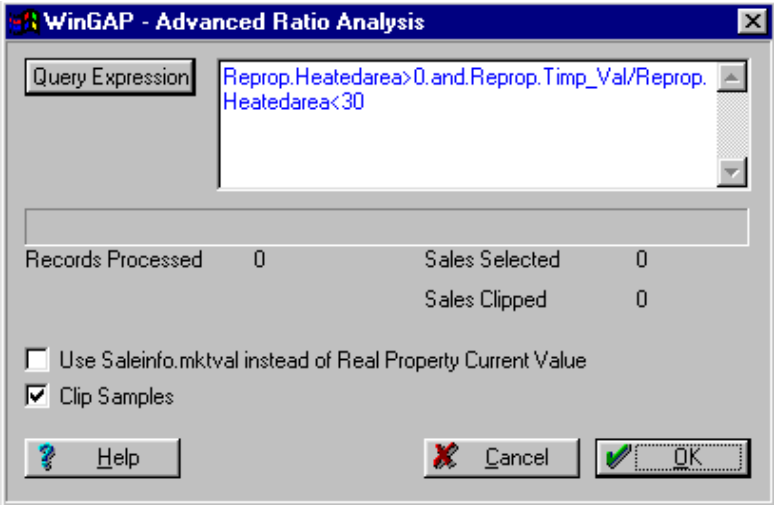


The final step in building the expression is to limit it to those houses that have a value under $30 per square foot. This is done by keying the less than sign ("<"), then keying 30 after the less than operator. When the user has finished constructing the Query Expression, it should appear similar to the example shown on the next page.

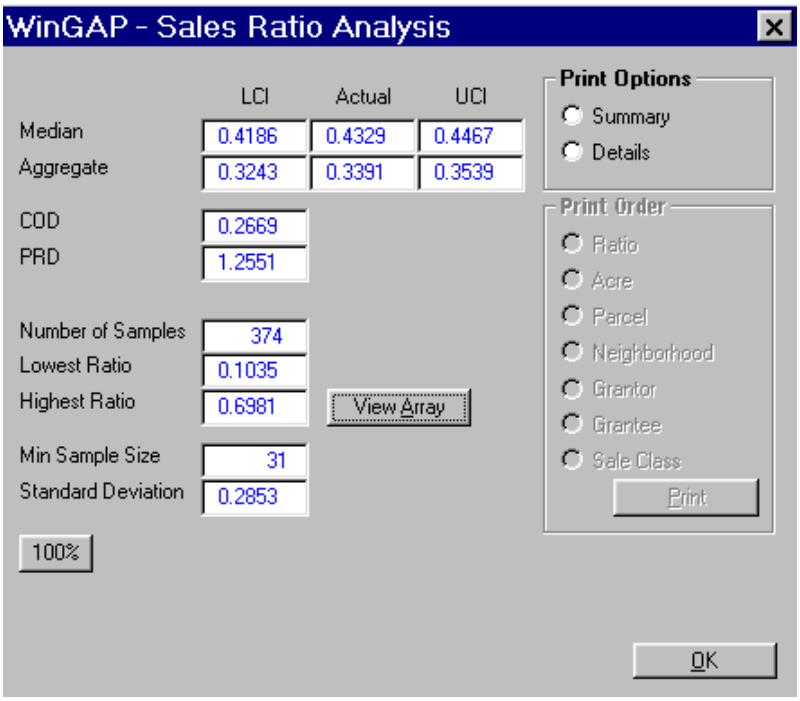


(As previously mentioned, the speed of the process is greatly enhanced if a criteria from Saleinfo is used. In situations where Saleinfo data is not critical to the results of the query, the user can use a criteria as basic as year(saleinfo.saledate) > 1800.)

The Test Button should be clicked to "test" the Query Expression. If the Query Expression is valid, the OK button is clicked to return to the Advanced Ratio Analysis Form, where the Query Expression will appear in the window on the Form, below.



The user can now click the OK Button to run the Sales Ratios Study for all sales for houses that have a square foot value less than $30 per square foot. Once the sales are analyzed and the sales ratios calculated, the Sales Ratio Analysis Form will appear, similar to the one shown on the next page.

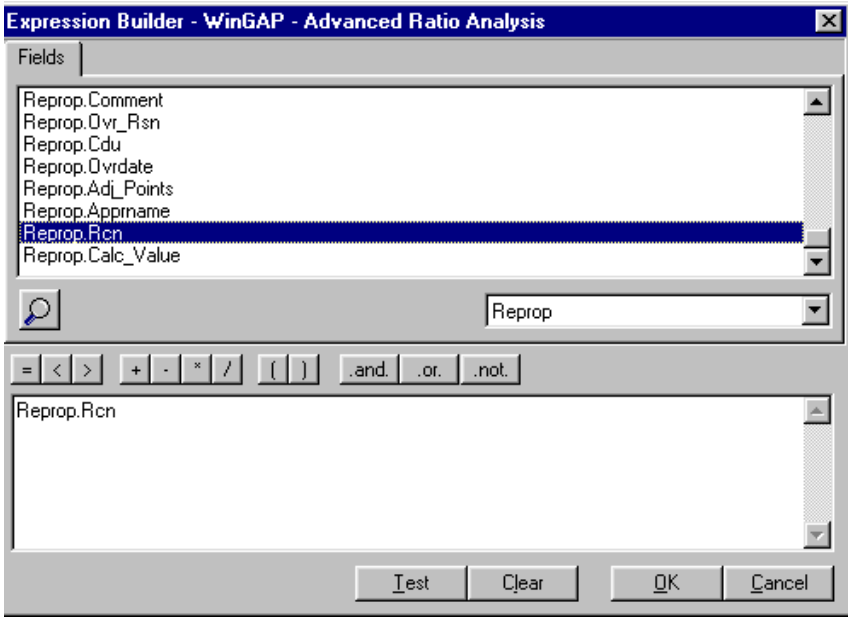


The Sales Ratio Analysis Form will display the sales ratios and other statistics and present the user with several options for printing the Ratio Study. The user can also look at a list of the sales that met the selection criteria and edit these sales if needed. The Sales Ratio Analysis Form was discussed under Basic Selection, earlier in this manual, and the user can refer to those pages for more information if desired.

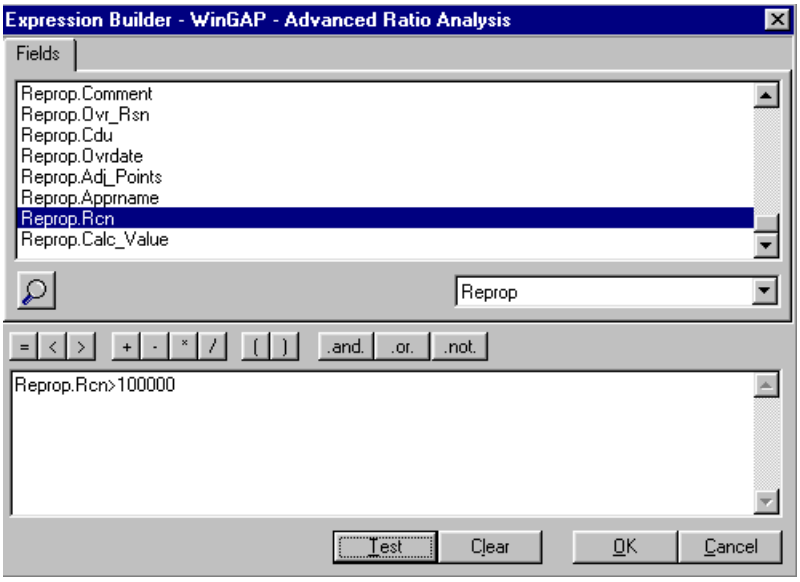
Example Four: a study of all sales for houses that have a replacement cost new value greater than 100,000.

Since this example uses house data, the Reprop database file will again be used. The replacement cost new value of a house is found in the RCN field. (NOTE: The County MUST have run Reappraise for Real Property at least once in order for this field to be populated with values). The user will need to employ just one operator, the relational ">" (greater than) operator, in this Query Expression.

Once on the Expression Builder Form, the user should first locate the Reprop database, and then the RCN field, and double click on it as shown on the next page.

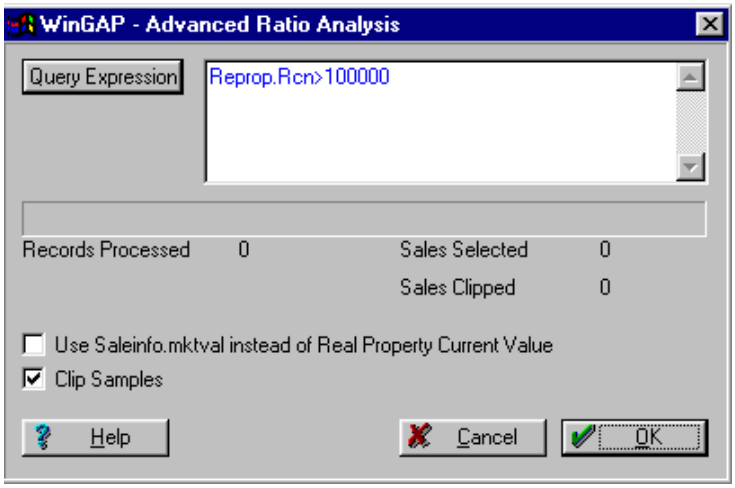


The sales ratio study example was for sales for all houses with a RCN value greater than $100,000. The user should key the greater than sign (">"), then key 100000 after the greater than operator. When the user has finished constructing the Query Expression, it should appear similar to the example shown below.

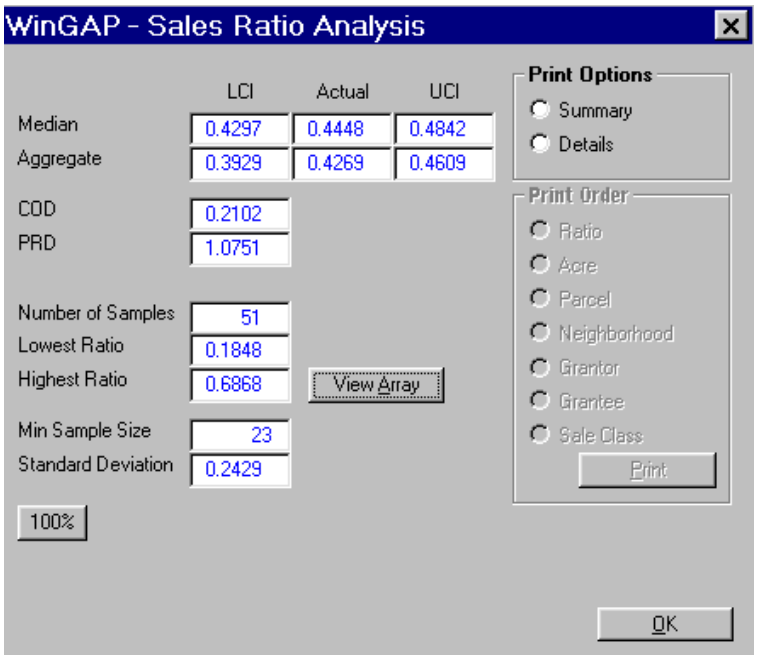


(As previously mentioned, the speed of the process is greatly enhanced if a criteria from Saleinfo is used. In situations where Saleinfo data is not critical to the results of the query, the user can use a criteria as basic as year(saleinfo.saledate) > 1800.)

The Test Button should be clicked to "test" the Query Expression. If the Query Expression is valid, the OK button is clicked to return to the Advanced Ratio Analysis Form, where the Query Expression will appear in the window on the Form, as shown on the next page.



The user can now click the OK Button to run the Sales Ratios Study for all sales for houses with a replacement cost new greater than $100,000. Once the sales are analyzed and the sales ratios calculated, the Sales Ratio Analysis Form will appear, similar to the one below.



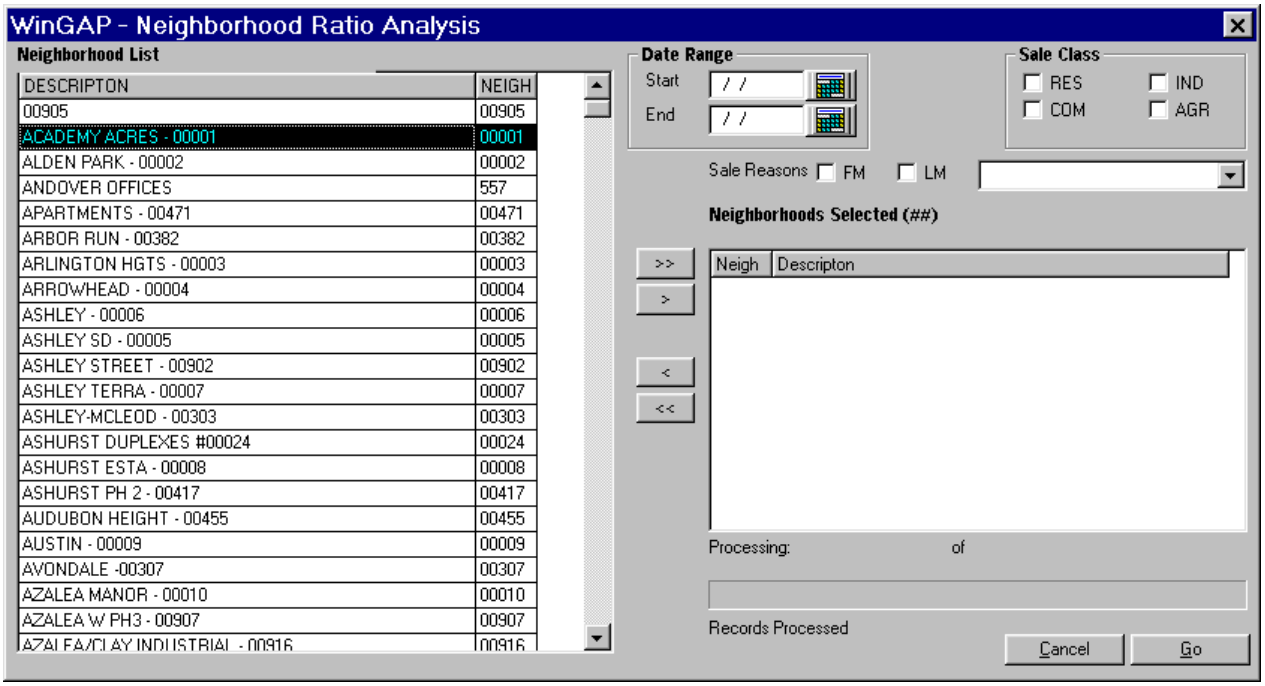
The Sales Ratio Analysis Form will display the sales ratios and other statistics and present the user with several options for printing the Ratio Study. The user can also look at a list of the sales that met the selection criteria and edit these sales if needed. The Sales Ratio Analysis Form was discussed under Basic Selection, earlier in this manual, and the user can refer to those pages for more information if desired.

Neighborhood Analysis

The Neighborhood Analysis option on the Sales Analysis Menu, below, provides a tool that the Assessors' Office can utilize in the generation of ratio studies based on Neighborhoods.

NOTE: For Neighborhood Analysis to function properly, the County must set up Neighborhoods in **Tools >> Schedules / Tables > Neighborhoods**.

Clicking on this option will produce the Neighborhood Ratio Analysis Form, below.



Neighborhood List Box

The left side of the Form contains a list box of all the Neighborhoods in the County, arranged in alphabetical (descending) order. The user can move around the list box to select Neighborhoods for inclusion in the Ratio Study by using the arrow keys, the page up and down keys, and the home and end keys on the keyboard. The user can also press the first letter in the name of a Neighborhood and go directly to the first Neighborhood that begins with that letter. The mouse can also be used to move around in the list box by clicking on the "thumb" in the vertical scroll bar and dragging it up or down.

Sales Criteria

Neighborhood Ratio Studies are run based upon a more limited set of Sales Criteria than Ratio Studies that are run using either the Basic Selection or Advanced Query methods. The fields on the Form use the information keyed on the Sales Form when adding sales to Real Property.

Date Range fields

- Start: The Start field is where the Starting Date for sales to be used in the Ratio Study is keyed. The date keyed in this field is inclusive. For example, if the user wants a Study of all sales after January 1, 2002, then 01/02/2002 would be keyed in this field. The Start date field should be left blank if it is not to be used as a criteria in the Ratio Study.
- End: The End field is where the Ending Date for sales to be used in the Ratio Study is keyed in the same manner as the Start date. Like the Start date, the date keyed in the End date field is inclusive. The End date field should be left blank if it is not to be used as a criteria in the Ratio Study.

Sale Class fields

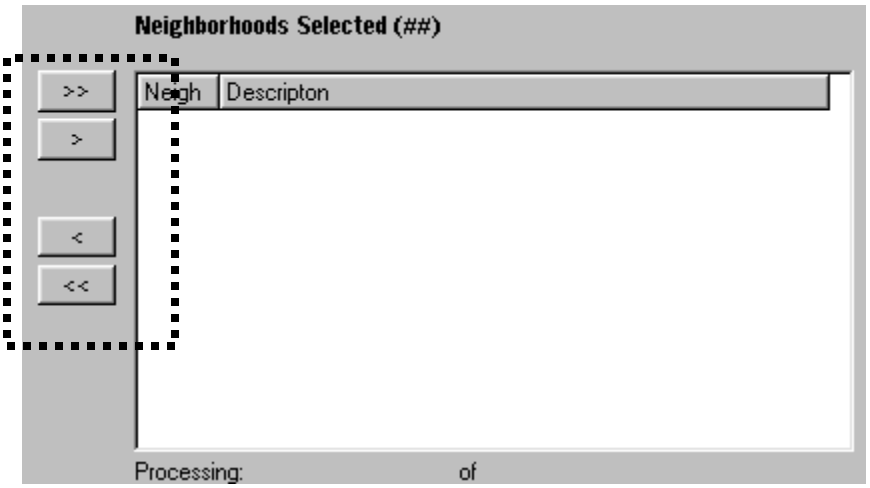
- Four checkboxes are available where the Sales Classification of the sale can be selected to further qualify the Ratio Study. Any or all of the checkboxes can be selected. If all of the Class checkboxes are left blank, the Sales Class will be ignored in the selection of sales.

Sales Reason fields

- Two checkboxes and a combo box are available to set criteria for the Sale Reasons to be used for the Ratio Study. If only the **FM** (Fair Market) checkbox is checked, and the combo box left blank, only sales with a Sales Reason of Fair Market will be used. If only the **LM** (Land Market) checkbox is checked, and the combo box left blank, only sales with a Sales Reason of Land Market will be used. If both the FM and LM checkboxes are checked, and the combo box left blank, only sales with a Sales Reason of Fair Market or Land Market will be used. The FM and/or LM checkboxes can also be used with any of the Sale Reasons in the combo box to run a Ratio Study. Finally, the FM and LM checkboxes can be left blank and a specific reason in the Sales Reason combo box can be used to run a Ratio Study for a specific type of Sale Reason.

Neighborhoods Selected List Box

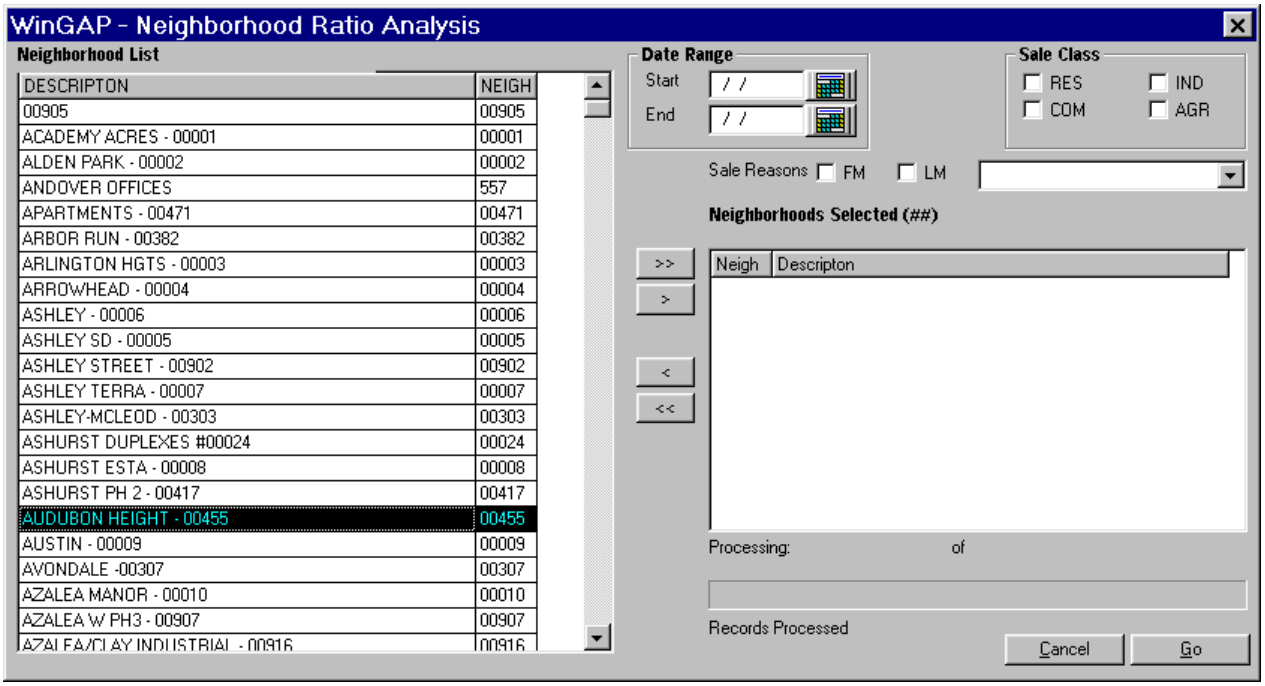
Beneath the Sales Reason section of the Form is a list box that will display all of the Neighborhoods selected for the Ratio Study. Neighborhoods are placed in the list box by using the four arrow buttons located to the left of the Neighborhoods Selected list box, as seen on the next page.



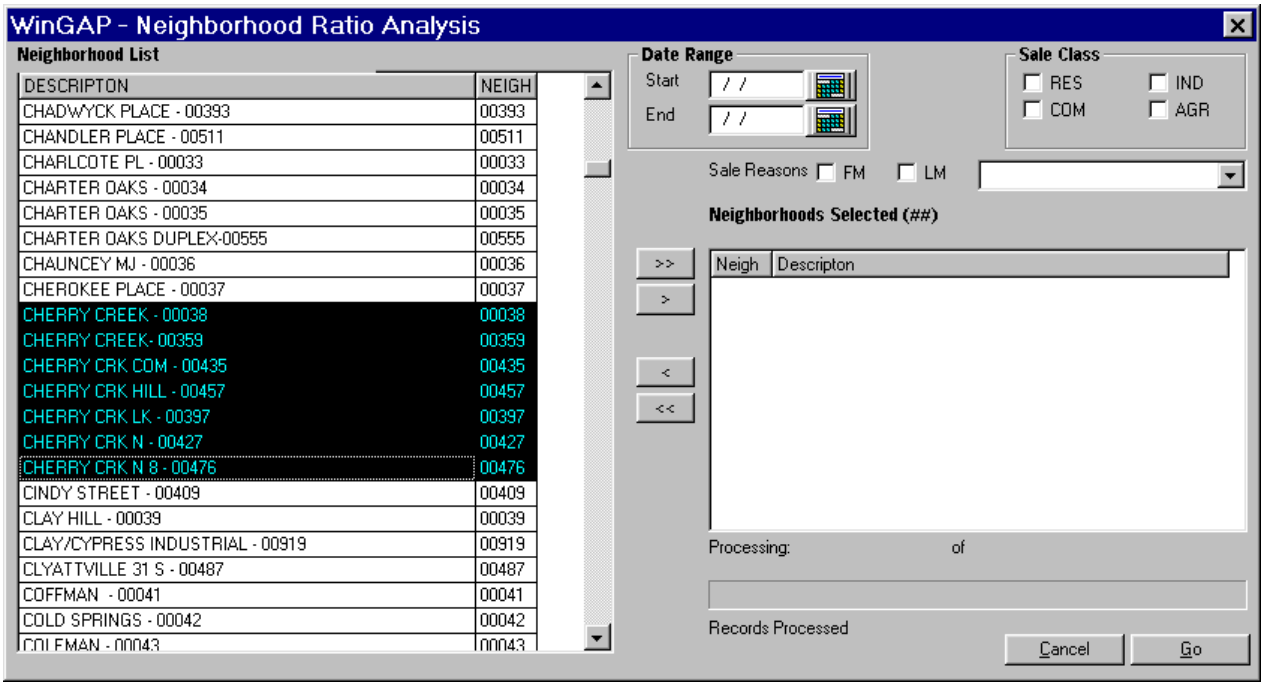
The top button, with two arrows on it pointing to the right, will place all of the Neighborhoods in the Neighborhood list box on the left side of the Form into the Neighborhoods Selected list box. The next button, with one arrow pointing to the right, will place any selected Neighborhoods from the Neighborhood list box on the left of the Form into the Neighborhoods Selected list box. The third button, with one arrow pointing to the left, will remove any selected Neighborhoods from the Neighborhoods Selected list box on the right side of the Form. The bottom button, with two arrows in it pointing to the left, will remove all of the Neighborhoods in the Neighborhood list in the Neighborhoods Selected list box.

Selecting Neighborhoods

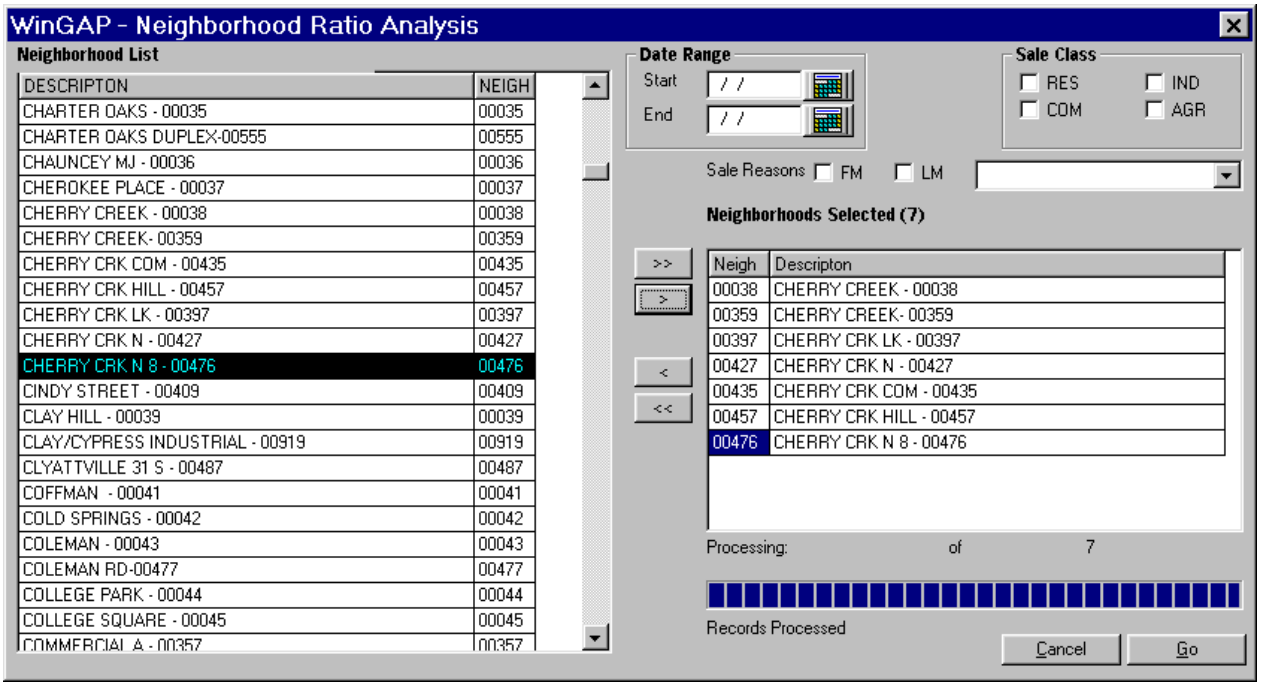
One Neighborhood can be selected for inclusion in the Ratio Study by clicking on the desired item in the Neighborhood List Box, as seen below.



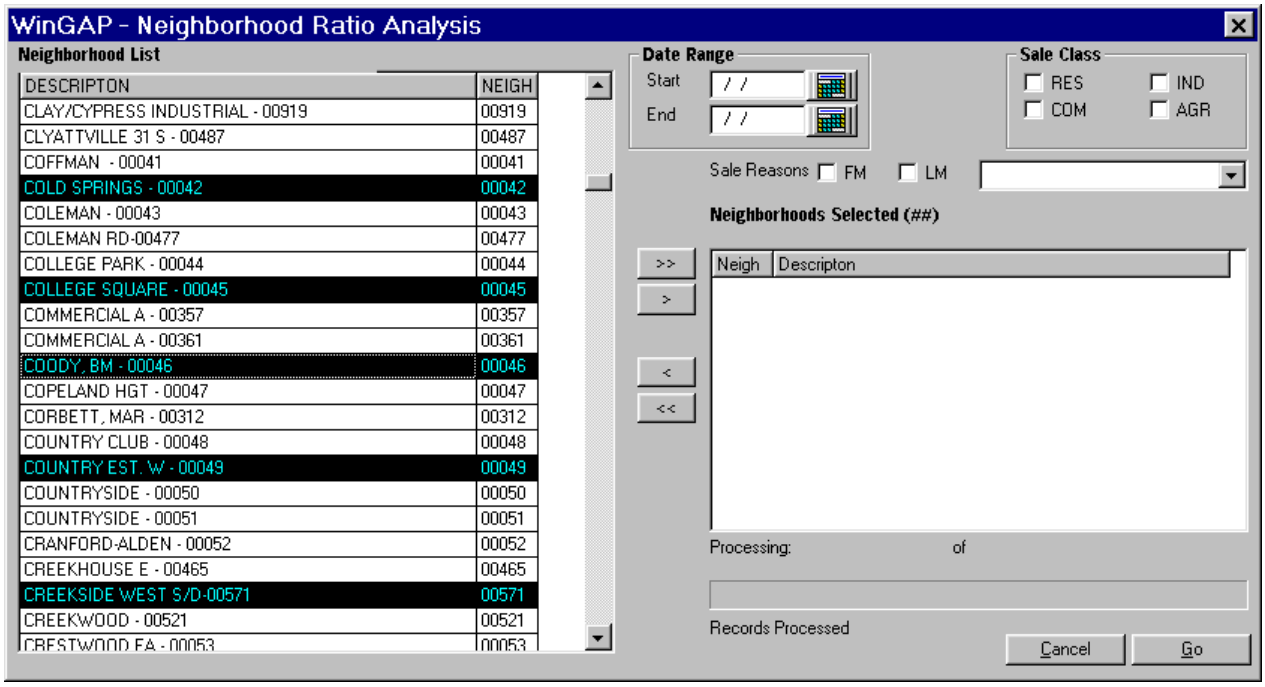
A range of Neighborhoods can be selected for inclusion in the Ratio Study by clicking on the first item in the desired range, holding the Shift key down, and then clicking on the last item in the range. An example of a range of Neighborhoods selected for a Ratio Study appears below.



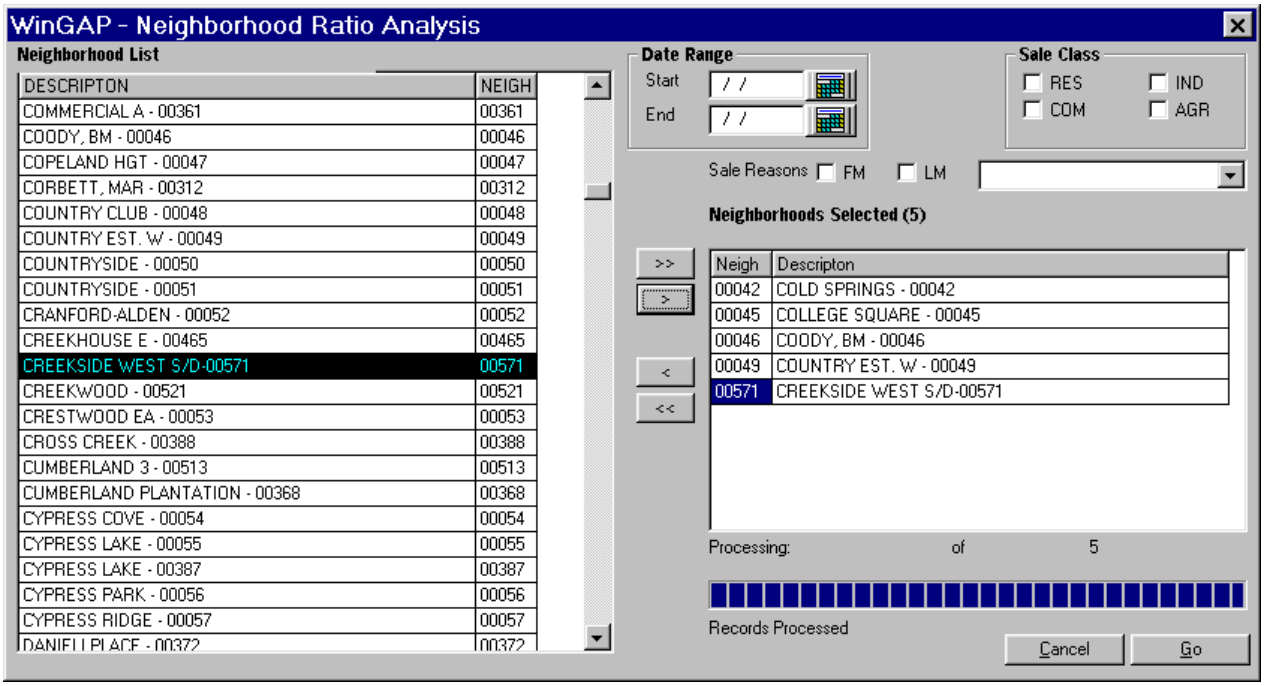
The Button with one arrow pointing to the right would be clicked to send these Neighborhoods to the Neighborhoods Selected list box, as seen below.



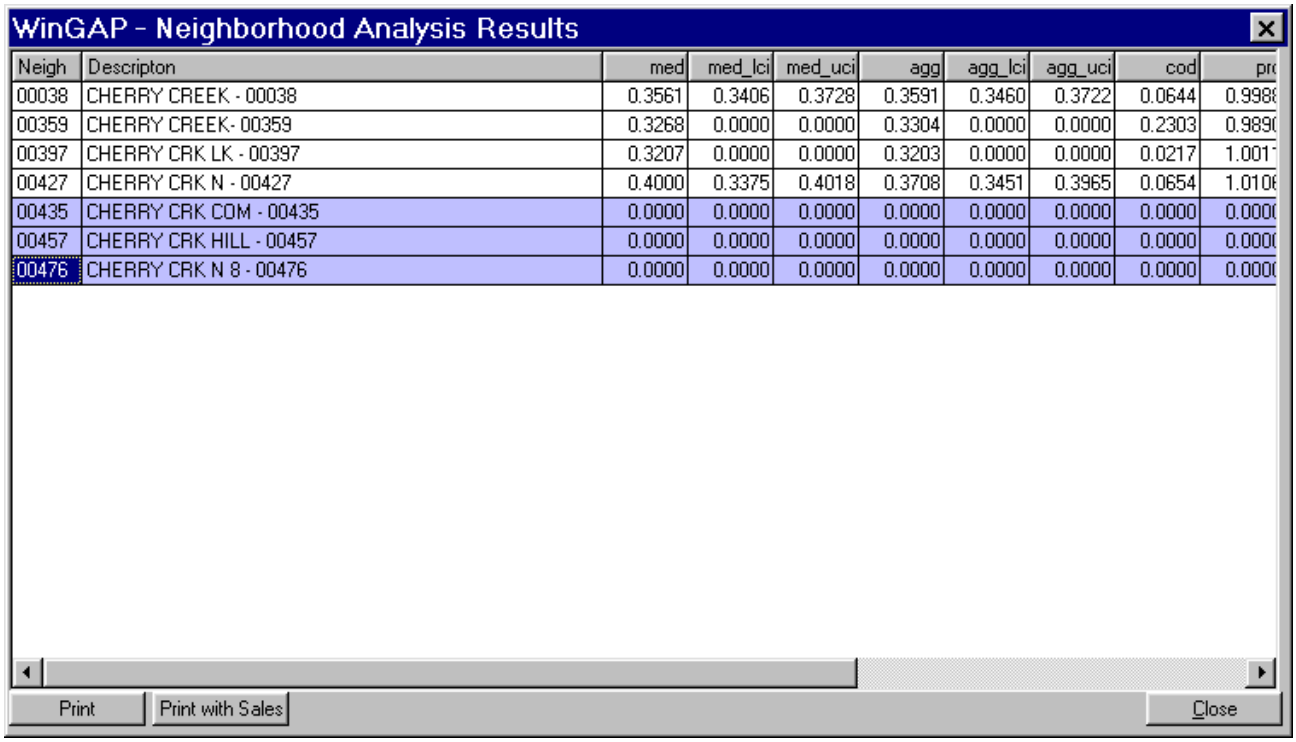
If the user wishes to select various, random, Neighborhoods, these can be selected for printing by clicking on the first item, holding the Ctrl key down, and then clicking on each of the other desired items. An example of various Neighborhoods selected for a Ratio Study appears below.



Again, clicking the Button with one arrow pointing to the right would send these Neighborhoods to the Neighborhoods Selected list box, as seen below.



Once all of the Neighborhoods to be included in the Ratio Study have been selected, and the Starting and Ending Sales Dates, Sales Classes, and Sales Reasons have been selected on the Analysis form, the Go Button on the lower right of the Neighborhood Ratio Analysis form should be clicked. After the records are processed, the Neighborhood Analysis Results form will appear, as seen below.



The Neighborhoods will be listed in Neighborhood Code order on the Results form, and Neighborhoods that have no Sales for the criteria entered will be highlighted in BLUE.

Listed left to right on Results Form are the following:

- The **Neighborhood Code**, as defined by WinGAP for that Neighborhood.
- The **Neighborhood Description**, as entered by the County in the Neighborhood Schedule.
- The **Median Actual Ratio**. The Median Actual Ratio is a measure of central tendency that indicates the midpoint of the array of the sales ratios. The Median Ratio is the statistic used to determine the level of assessment for the study.
- The **Median Lower Confidence Interval**. The Median Lower Confidence Interval is used to determine digest acceptance if the Median Actual Ratio is less than .36.
- The **Median Upper Confidence Interval**. The Median Upper Confidence Interval is used to determine digest acceptance if the Median Actual Ratio is more than .44.
- The **Aggregate Actual Ratio**. The Aggregate Actual Ratio is the weighted average of the sales. It is calculated by dividing the sum of the assessments by the sum of the sales prices.

- The **Aggregate Lower Confidence Interval**. If the PRD(Price Related Differential, explained below) is outside of acceptable ranges and the Aggregate Actual Ratio is used to determine the assessment level, the Aggregate Lower Confidence Interval must fall within a ratio range of .36 to .44, unless the Aggregate Upper Confidence Interval (see below) is within this same range.

- The **Aggregate Upper Confidence Interval**. If the PRD is outside of acceptable ranges and the Aggregate Actual Ratio is used to determine the assessment level, the Aggregate UCI (Upper Confidence Interval) Ratio must fall within a ratio range of .36 to .44 to allow for assessment level acceptance.

The table below provides an illustration of the use of the UCI and LCI.

LCI	AGG	UCI	
32	34	36	Pass (UCI falls within (overlaps) acceptable range)
28	30	32	Fails
26	32	38	Pass (UCI falls within (overlaps) acceptable range)

- The **Coefficient of Dispersion**. The COD, or Coefficient of Dispersion, measures the degree of uniformity in the study. The COD is calculated by first determining the absolute deviation from the median for each sale (Ratio-Median). The average of the deviations is then calculated. The average deviation is then divided by the median ratio to produce the COD. The COD should be less than .15 for residential property and less than .20 for agricultural, commercial, and industrial properties.

- The **Price Related Differential**. The PRD, or Price Related Differential, is used to measure assessment bias in a ratio study. The PRD should fall between .95 and 1.10. It is calculated by dividing the mean ratio by the aggregate ratio. If the PRD is greater than 1.00, the lower priced properties generally have higher ratios than the higher priced properties. The study is exhibiting regressivity. If the PRD is less than 1.00, the higher priced properties are overvalued compared to the lower priced properties. The study exhibits progressivity.

- The **Number of Samples**. The number of sales that are included in the Ratio Study for that Neighborhood.

- The **Lowest Ratio**. The Lowest Ratio of any sale that meets the selection criteria and is used in the Ratio Study.

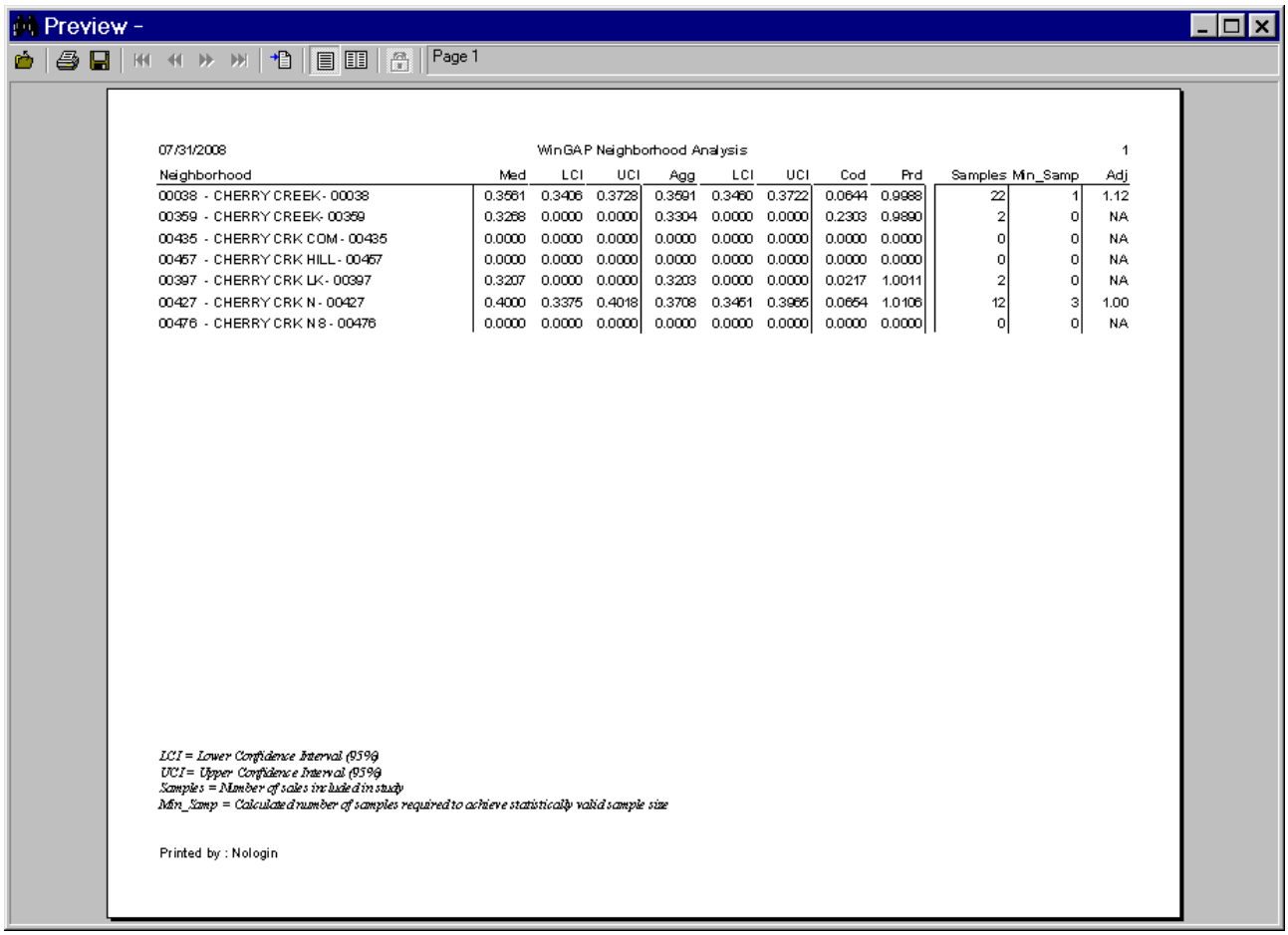
- The **Highest Ratio**. The Highest Ratio of any sale that meets the selection criteria and is used in the Ratio Study.
- The **Minimum Sample Size**. The smallest number of samples in a ratio study that will constitute a valid ratio study. The Min Sample Size is a function of the uniformity in the ratio study. A ratio study with greater uniformity has a lower Minimum Sample Size.

- The **Standard Deviation**. The basic numeric measure of the extent of variation of the sample around the center (measure of central tendency).

- The **Neighborhood Adjustment Factor**. The Neighborhood Adjustment Factor for that Neighborhood, as entered by the County in the Neighborhood Schedule.

Print Button

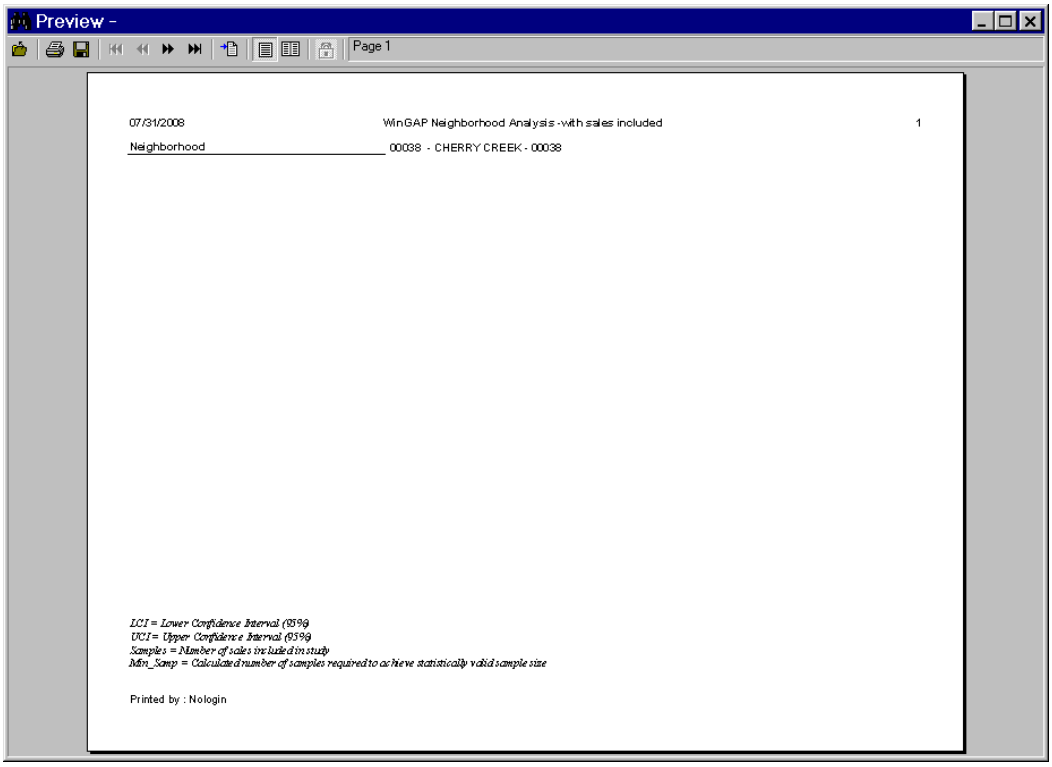
The **Print Button** on the lower left of the Results form can be clicked to display a Print Preview of the Ratio Study, as seen on the next page.



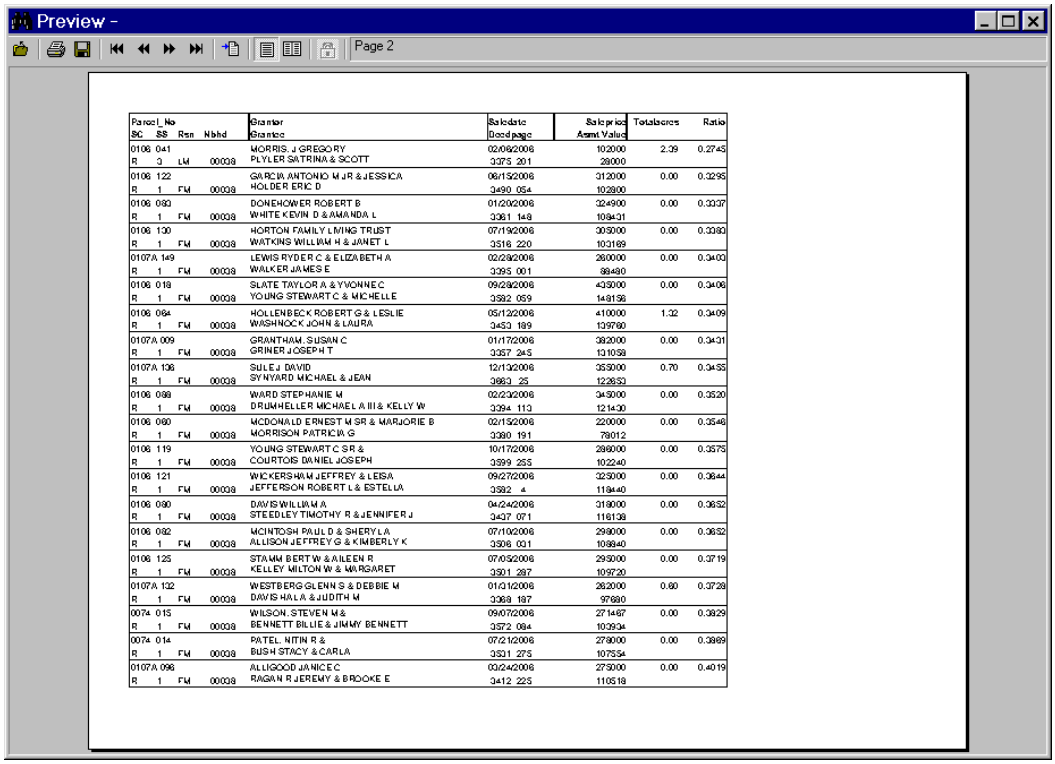
Print With Sales Button

The **Print With Sales** Button, also on the lower left of the Results form, can be clicked to display a Print Preview of the Neighborhood Ratio Study, with sales, as seen on the next page.

The first page of the Sales Included report shows the Neighborhood name for the first Neighborhood.

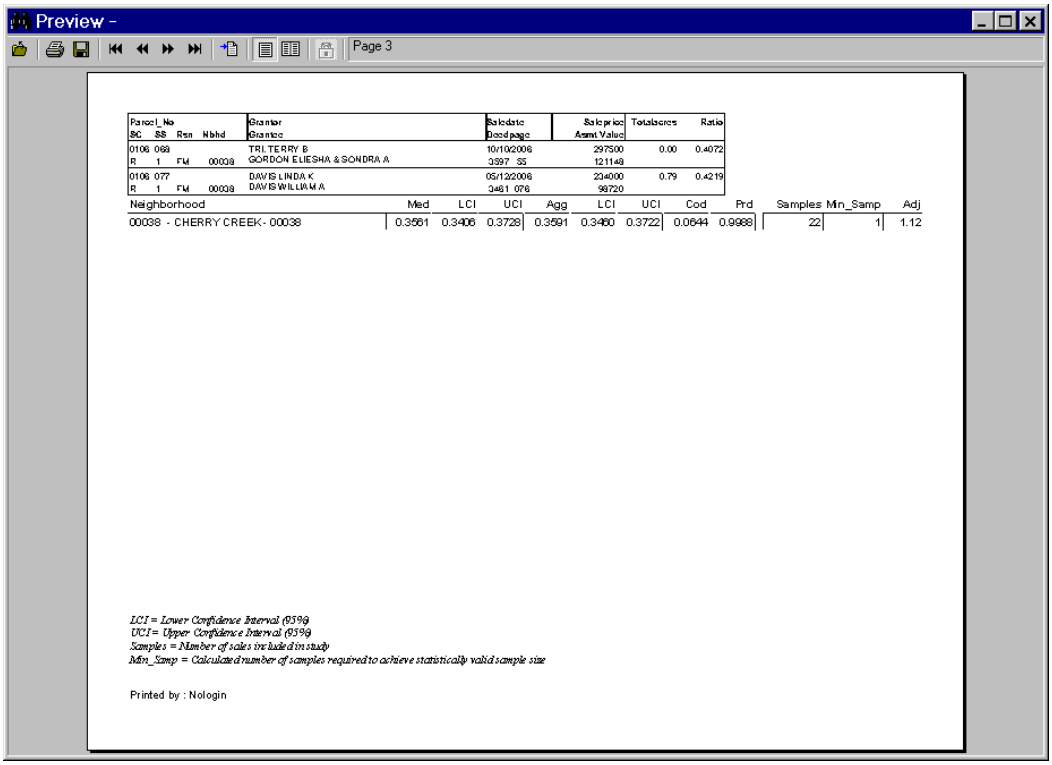


The second page shows the actual sales included on this Ratio Study for this Neighborhood. There may be more than one page for each Neighborhood.

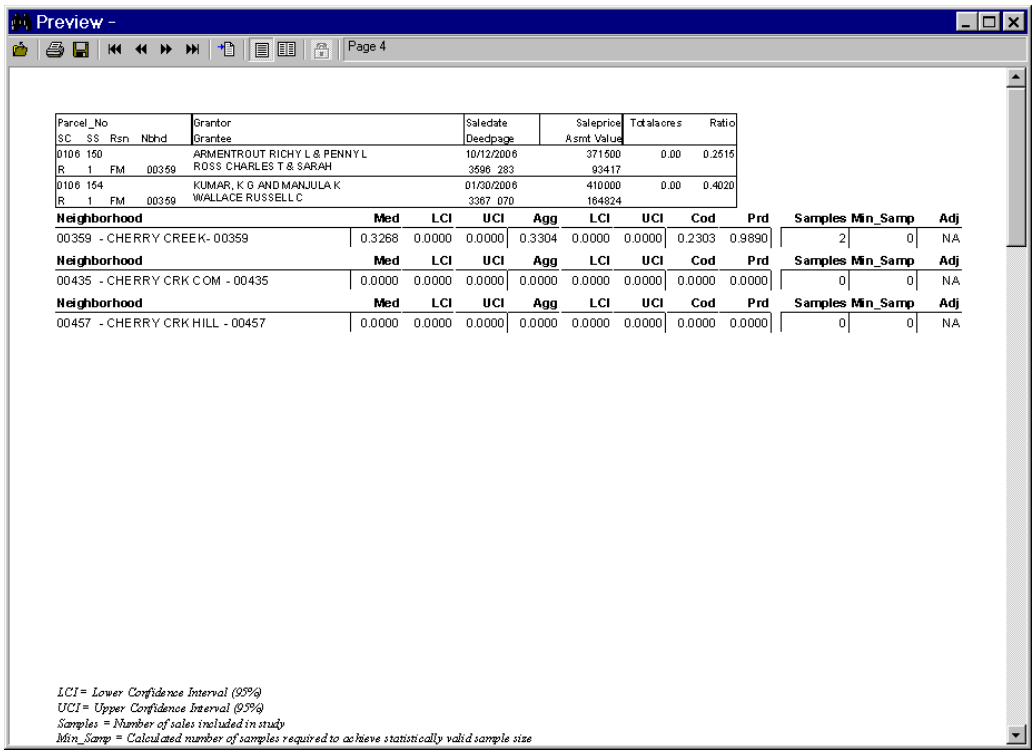


Parcel_No SC SS Rsn Nbhd	Grantor Grantee	Saledate Deed page	Saleprice Asmt Value	Totalacres	Ratio
0106 041 R 3 LM 00038	MORRIS, J GREGORY PLYLER SATRINA & SCOTT	02/06/2006 3375 201	102000 29000	2.09	0.2745
0106 122 R 1 FM 00038	GARCIA ANTONIO M JR & JESSICA HOLDER ERIC D	06/15/2006 3490 054	312000 102800	0.00	0.3295
0106 093 R 1 FM 00038	DONEHOWER ROBERT B WHITE KEVIN D & AMANDA L	01/20/2006 3361 149	324900 109431	0.00	0.3337
0106 130 R 1 FM 00038	HORTON FAMILY LIVING TRUST WATKINS WILLIAM H & JANET L	07/19/2006 3516 220	303000 103189	0.00	0.3393
0107A 149 R 1 FM 00038	LEWIS RYDER C & ELIZABETH A WALKER JAMES E	02/28/2006 3395 001	260000 88480	0.00	0.3403
0106 018 R 1 FM 00038	SLATE TAYLOR A & YVONNE C YOUNG STEWART C & MICHELLE	09/29/2006 3582 059	433000 148198	0.00	0.3406
0106 084 R 1 FM 00038	HOLLENBECK ROBERT G & LESLIE WASHNOCK JOHN & LAURA	05/12/2006 3453 189	410000 139760	1.32	0.3409
0107A 009 R 1 FM 00038	GRANTHAM, SUSAN C GRINER JOSEPH T	01/17/2006 3357 245	382000 131059	0.00	0.3431
0107A 106 R 1 FM 00038	SULEJ DAVID SYNYARD MICHAEL & JEAN	12/13/2006 3663 25	353000 122853	0.70	0.3455
0106 089 R 1 FM 00038	WARD STEPHANIE M DRUMHELLER MICHAEL A III & KELLY W	02/23/2006 3394 113	345000 121430	0.00	0.3520
0106 060 R 1 FM 00038	MCDONALD ERNEST M SR & MARJORIE B MORRISON PATRICIA G	02/15/2006 3390 191	220000 78012	0.00	0.3546
0106 119 R 1 FM 00038	YOUNG STEWART C SR & COURTOIS DANIEL JOSEPH	10/17/2006 3599 255	296000 102240	0.00	0.3575
0106 121 R 1 FM 00038	WICKERSHAM JEFFREY & LEISA JEFFERSON ROBERT L & ESTELLA	09/27/2006 3582 4	323000 118440	0.00	0.3644
0106 090 R 1 FM 00038	DAVIS WILLIAM A STEEDLEY TIMOTHY R & JENNIFER J	04/24/2006 3437 071	318000 116139	0.00	0.3652
0106 092 R 1 FM 00038	MCINTOSH PAUL D & SHERYL A ALLISON JEFFREY G & KIMBERLY K	07/10/2006 3506 031	298000 108840	0.00	0.3652
0106 125 R 1 FM 00038	STAMM BERT W & AILEEN R KELLEY MILTON W & MARGARET	07/05/2006 3501 287	293000 109720	0.00	0.3719
0107A 132 R 1 FM 00038	WESTBERG GLENN S & DEBBIE M DAVIS-HALA & JUDITH M	01/31/2006 3368 187	262000 97680	0.00	0.3728
0074 015 R 1 FM 00038	WILSON, STEVEN M & BENNETT BILLIE & JIMMY BENNETT	09/07/2006 3572 084	271467 100934	0.00	0.3829
0074 014 R 1 FM 00038	PATEL, NITIN R & BUSH STACY & CARLA	07/21/2006 3531 275	279000 107554	0.00	0.3969
0107A 098 R 1 FM 00038	ALLIGOOD JANICE C RAGAN R JEREMY & BROOKE E	03/24/2006 3412 225	275000 110519	0.00	0.4019

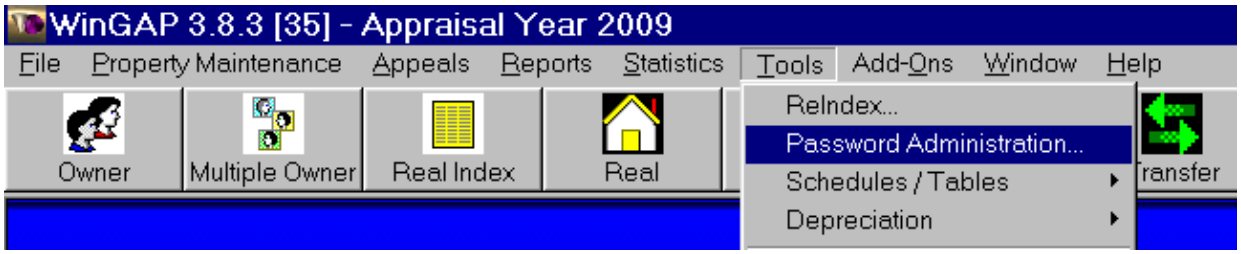
The final page displays the remaining sales and the summary Ratio Study data for this Neighborhood.



If more than one Neighborhood was included in the Ratio Study, the pages for those Neighborhoods will follow, as seen below.

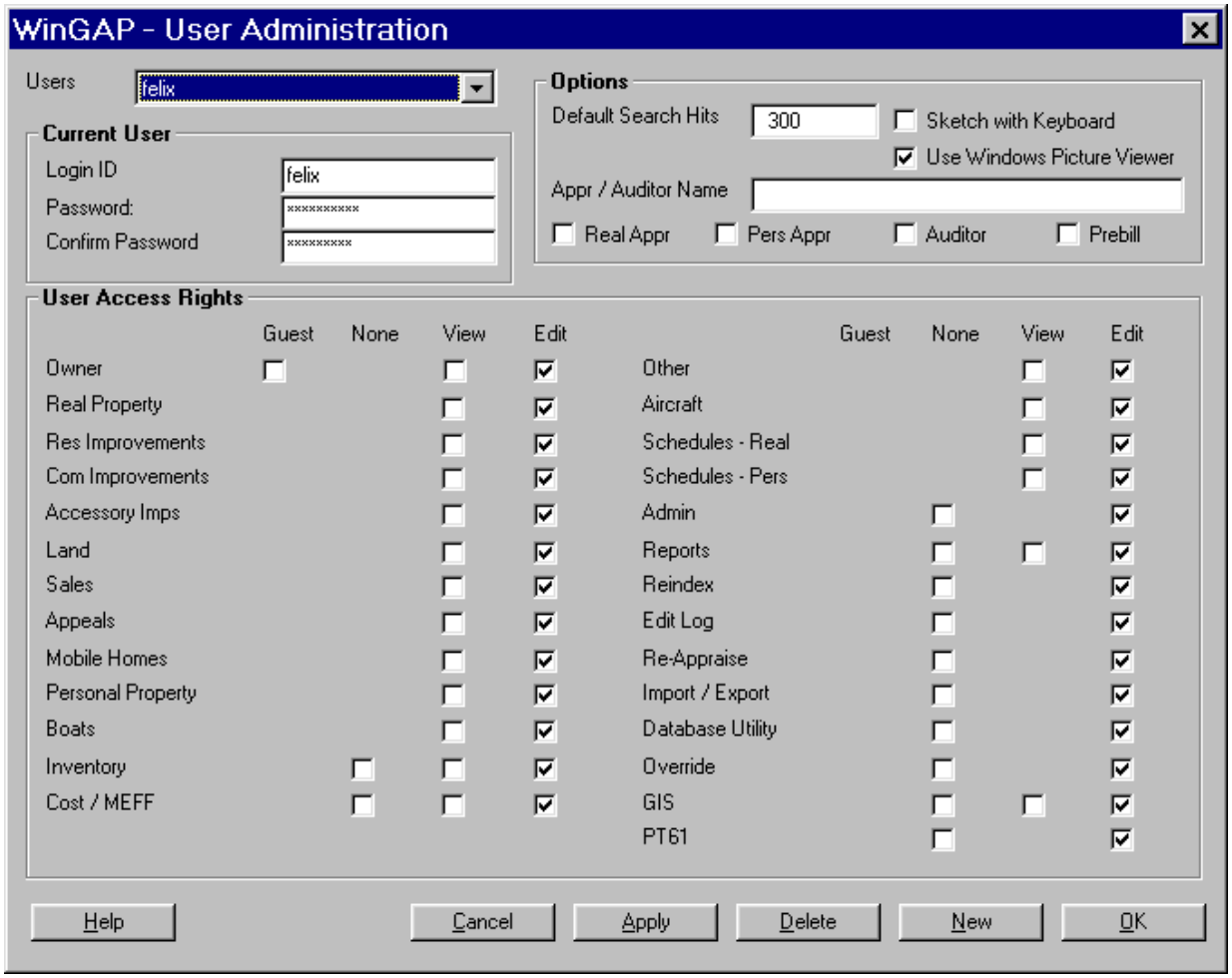


Password Administration



Password Administration is used to set up WinGAP users and the respective "rights" that each user will have in the system. WinGAP CAN be operated without setting up users. However, it is recommended that users be set up and rights assigned, as this provides control within the Assessors' Office over who operates what parts of WinGAP and who makes changes to property data, as well as when these changes occur.

Selecting the Password Administration option on the Tools Menu, above, produces the WinGAP User Administration Form. If any users exist, the first user in descending alphabetical order will appear on the Form, where that user's rights can be edited. Other users can be selected for editing or deleting by clicking on the Users combo box.



To set up a new user, the New Button should be clicked, and the system will request a User Login ID. The Login ID can be a maximum of 10 characters (lower case only), numbers, or symbols in any combination. After keying the Login ID, the next field is where the User Password is entered. The User Password can also be a maximum of 10 characters, numbers, or symbols in any combination, but BOTH upper and lower case characters are accepted. The Password must be re-keyed in the Confirm Password box before it is accepted. Next is the User Default Search Hits field, which defines the number of records that will appear in any Search List Box. The default is 25 and can be changed to any number between 1 and 10,000, depending upon the preference of a particular User.
The Sketch with Keyboard checkbox sets up a default preference for Sketching that can be associated with each user. Placing a checkmark in this box will default the Sketch screen to Sketch with Keyboard for this user; no checkmark will default the Sketch screen to drawing with the mouse.

The Use Windows Picture Viewer provides the user with the ability to define which application will be used to open digital images (photos) that are assigned to parcels, improvements, sales, etc. If the box is checked, WinGAP will use the default Windows picture viewer which may be Paint, Windows Picture and Fax Viewer, etc. If the box is left unchecked, the WinGAP viewer will be used. If the WinGAP viewer is used, the resolution of the saved photos cannot be any greater than the Desktop resolution. Important: See the next section, Setting Up A Default Windows Picture Viewer, for instructions on how to set up a default Windows Picture Viewer.

Next, the Appr / Auditor Name field is used to assign Appraisers and Auditors to a list that will appear on various data entry Forms in WinGAP, such as the Real Property General Information Form, the Personal Property General Information Form, etc., where they can be assigned as the Primary Appraiser or Alternate Appraiser for a Real Property Parcel or Personal Property Account. Beneath this field are four checkboxes where, if checked, the Appraiser or Auditor Name, if used, will appear in the Appraiser list on the data entry Forms for the those types of property.

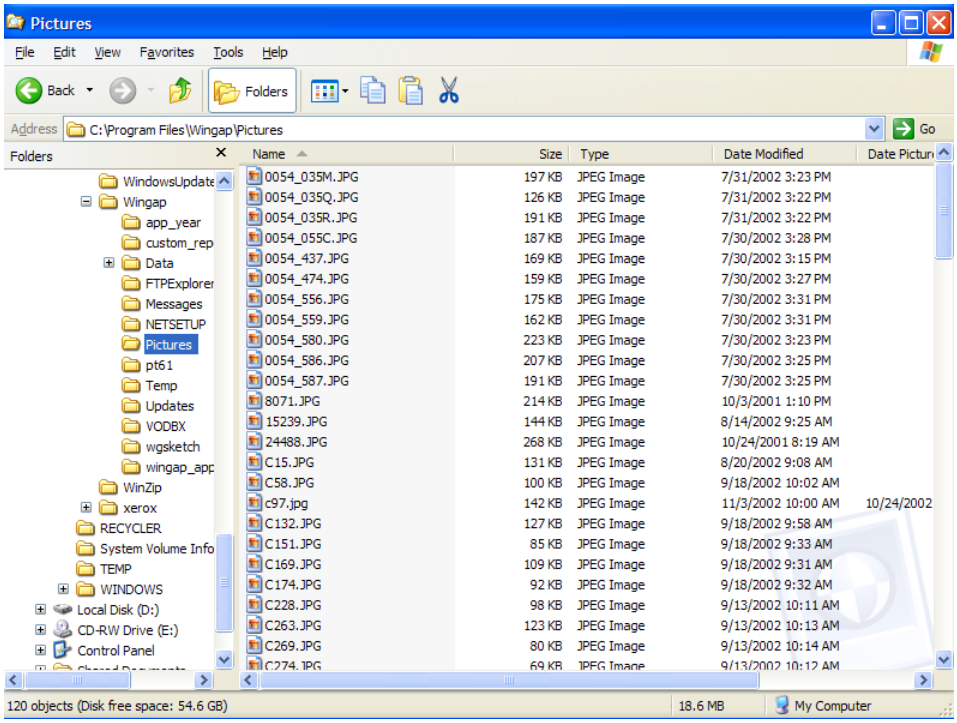
The User Access Rights section of the User Administration Form contains a number of checkboxes where SPECIFIC access rights to WinGAP are assigned for each user. The default setting for each user is Edit rights for all parts of WinGAP. These rights can be adjusted for each user by clicking in the appropriate checkbox to restrict a User's rights to certain parts of WinGAP. For example. a user could be given no (None) rights for some parts of WinGAP (Real Property, Land, Re-Appraise, etc), view rights for other parts (Owner), and edit rights for all of Personal Property.

IMPORTANT: If Guest rights for an Owner are assigned to a user, the confidential information such as SSN, FEI, etc will be masked when the user accesses the Owner screen.

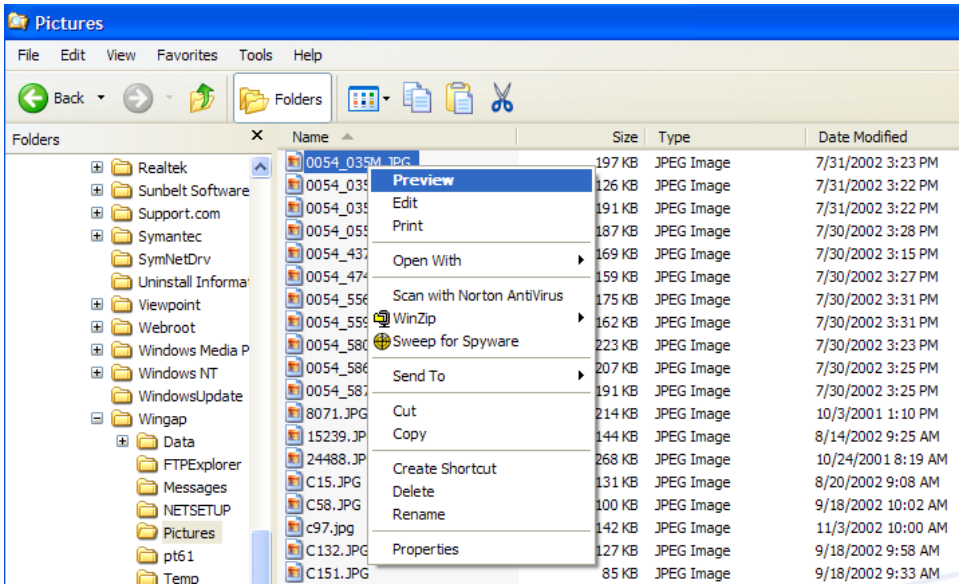
Once a User's Login ID, Password, Default Search Hits, and Rights are established, the record is saved by clicking on the Apply Button and remaining on the User Administration Form to set up other Users. The OK Button can be clicked to return to the main WinGAP screen.

Setting Up A Default Windows Picture Viewer

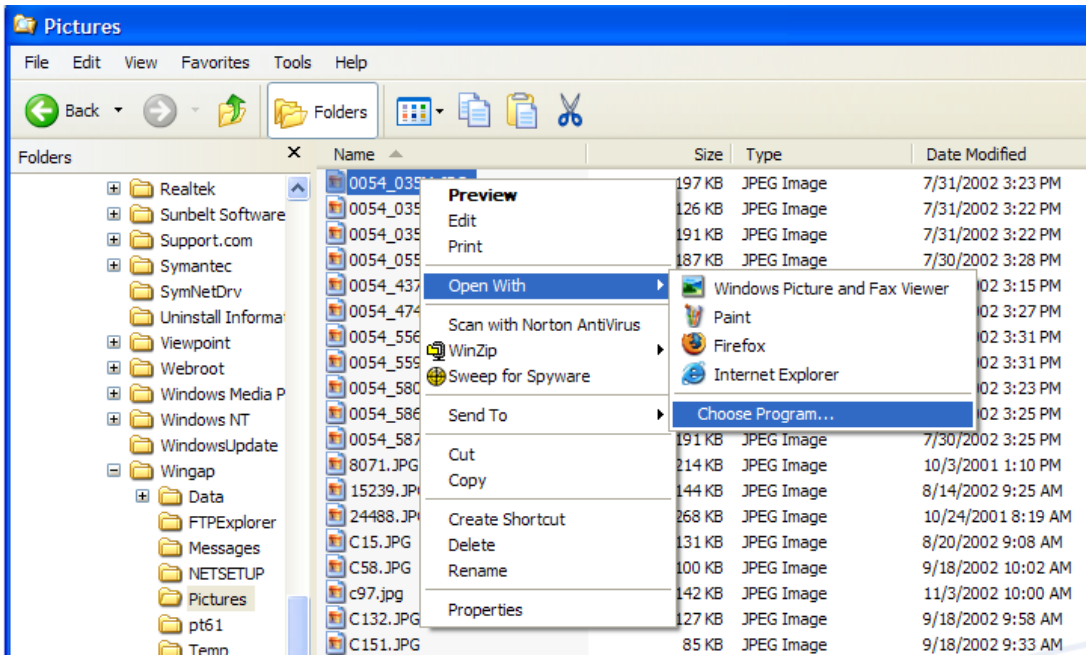
A default Windows Picture Viewer can be set up in the following manner. Using Windows Explorer, browse to the Pictures Folder within the WinGAP folder, as shown below.



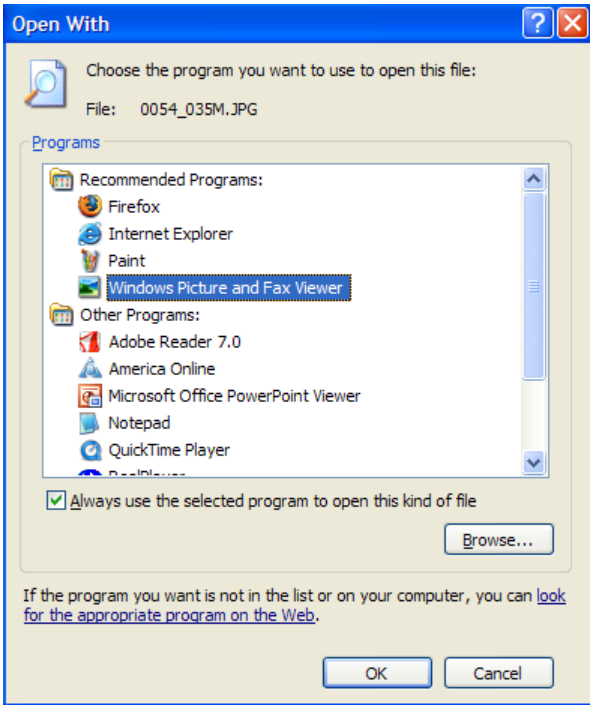
Right click on one of the .JPG picture files on the right side of the Windows Explorer screen. This will produce a menu, as shown below.



The user should click on the Open With option on this menu, which will produce a submenu with several options, as shown on the next page.

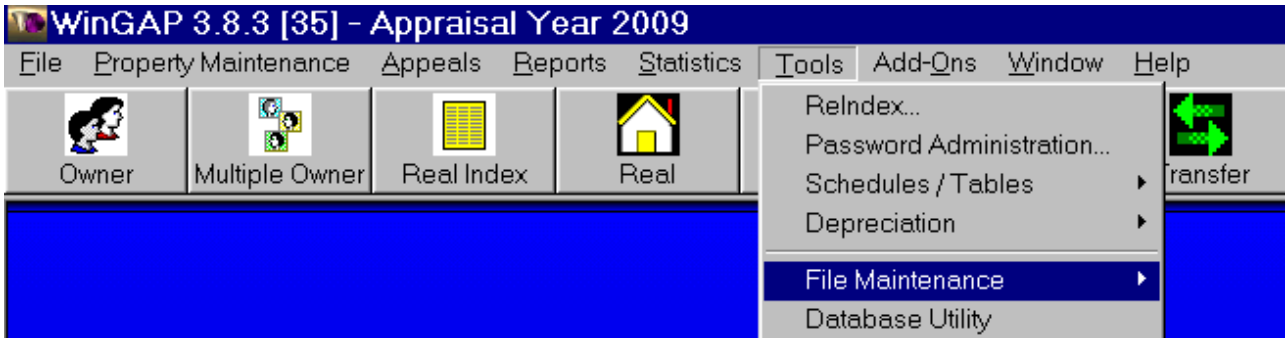


The Choose Program option on this submenu should be selected, as seen above, which will produce an Open With dialog box, as shown below.



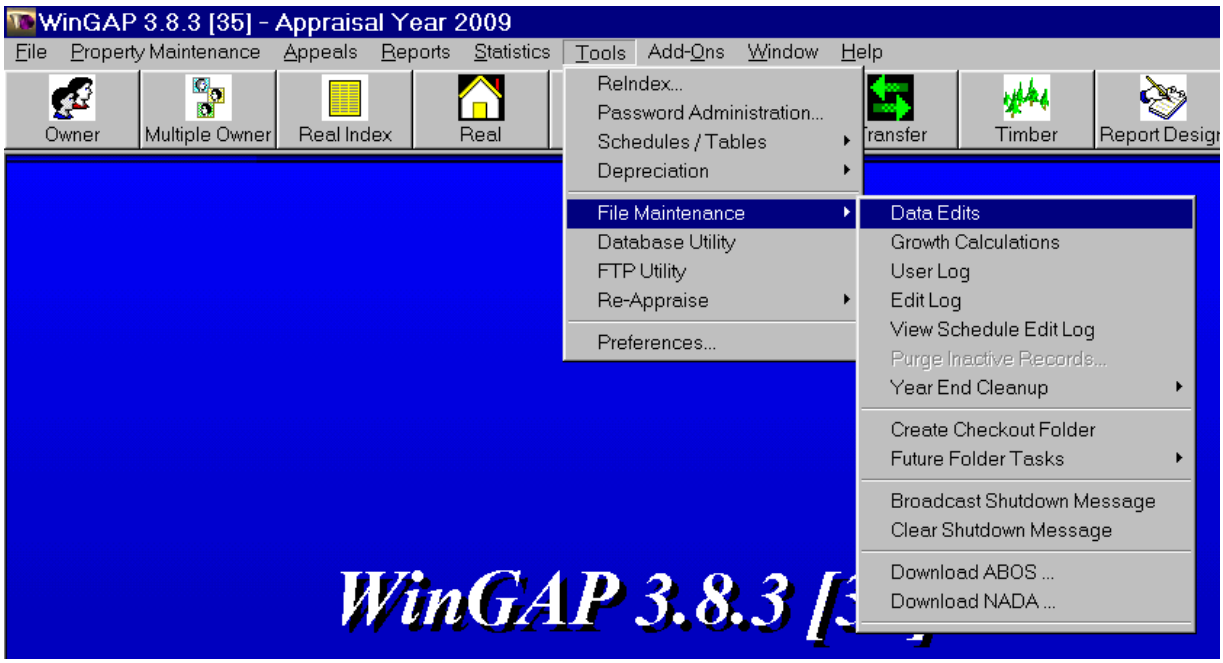
For optimal viewing of pictures within WinGAP, the "Windows Picture and Fax Viewer" option should be selected. Finally, and most importantly, the user should click in the checkbox to the left of "Always use the selected program to open this kind of file". This means that whenever a picture is viewed within WinGAP, the picture will always appear using the Windows and Fax Viewer. The OK button should be clicked on the Open With dialog box to save the selection and return the user to the Windows Explorer screen.

File Maintenance



The File Maintenance option on the Tools Menu, above, is used to access a supplemental menu, shown below, where:

1) The Data Edits routine can be run
2) The Growth Calculations routine can be run
3) The complete User Log can be viewed
4) The entire Edit Log for WinGAP is accessed
5) The Schedule Edit Log can be viewed
6) Inactive records can be purged (NOTE: not functional in Version 3.8.3)
7) Year End Cleanup is run
8) The Checkout Folder can be created
9) Future Year Tasks, such as creating the Future Folder and updating the schedules in Future, can be accomplished
10) A Shutdown Message can be sent over a network
11) The Shutdown Message can be cleared
12) ABOS updates can be downloaded
13) NADA updates can be downloaded

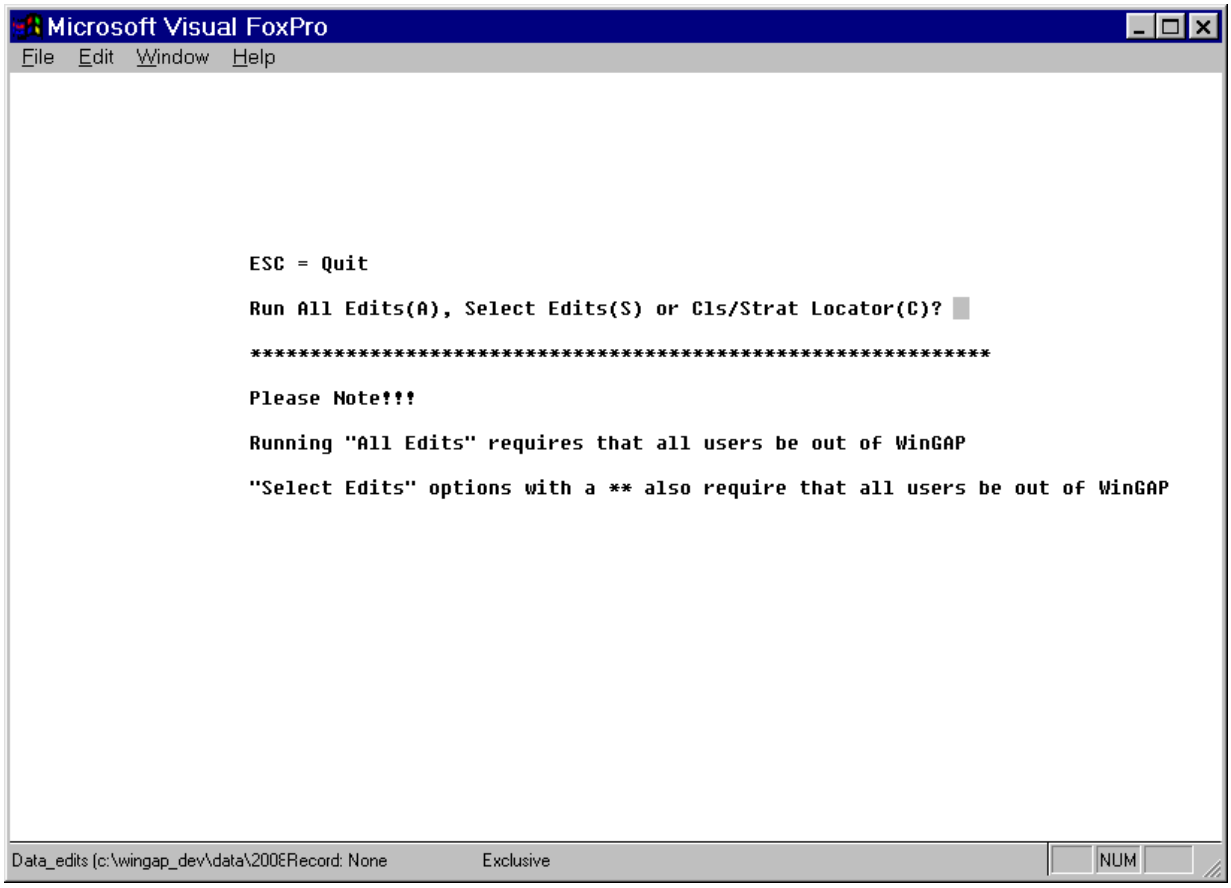


Data Edits

The **Data Edits** menu option provides the WinGAP Administrator with a means of checking data integrity prior to sending change of assessment notices, running digest exports or at any time such a check is desired. Before the Data Edits routine can be run the data_edits.exe must be present in the WinGAP folder and the data_edits.rpt file must be present in the appraisal year where the edits are being run.

NOTE: The user may receive a FoxPro error message when attempting to run Data Edits. This is normally due to FoxPro not being set up properly and it cannot locate the FoxPro libraries. The user can correct this problem by running NetSetup. See the section entitled Running NetSetup, at the conclusion of Data Edits, for these procedures.

Selecting the Data Edits option on the **Tools >> File Maintenance** menu presents the user with the option of which edits to run, as shown below.



IMPORTANT: As the message on the Data Edits window indicates, all users should be out of WinGAP when running Data Edits, except for certain Select Data Edits that are not marked with "**".

All Data Edits

If the user keys an "A", All of the Data Edits will run, and at the conclusion of the routine, the user will be presented a preview of the Data Edits report, discussed later.

The following checks and edits are made during the **All Data Edits** routine:

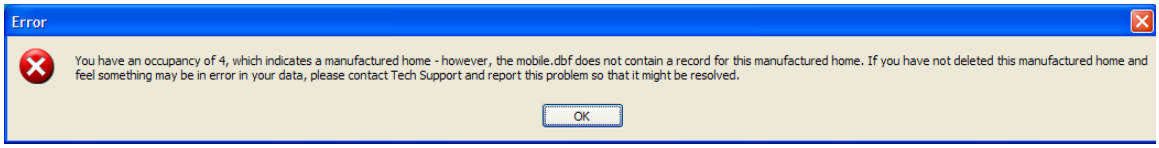
- **a.** Owners w/o property
- **b.** Parcels w/o property items (land, res imps, comm imps, accessories)
- **c.** Res imps w/ mh occupancy and no mobile home record
- **d.** Comm imps w/ extra feature value but no extra features
- **e.** Personal Prop Accts w/o property items (cost, boats, etc)
- **f.** Parcels/Accts where the sum of items does not equal current value (current value is corrected in such situations)
- **g.** Orphaned records (records that do not have a parent, i.e. parcels with no owner, res imps not attached to a parcel, etc)
- **h.** Property with zero value
- **i.** Properties that exceed user specified min and max values
- **j.** Homesteaded parcels w/o improvements
- **k.** Properties w/ missing digest codes
- **l.** Conservation Use Covenant issues
- **m.** Preferential Covenant issues
- **n.** Freeport Exemption data problems
- **o.** Mfg Housing data problems
- **p.** Change of Assessment Reason assignments
- **q.** Parcels and Personal Property Accounts that have a value difference but no COA Reason/Not Flagged for Notice
- **r.** Mfg Housing class assignments
- **s.** Life Expectancy Assignments for Mfg Housing
- **t.** Land Type/Class Validation
- **u.** Zero Value Prebilled Mobile Homes
- **v.** Frozen and Removed Homesteaded Parcels
- **w.** No PT50 Accounts
- **x.** Various Other Homestead Edits
- **y.** Preferential Covenant Change In Ownership
- **z.** Conservation Use Acre / Market Acre comparison
- **aa.** Conservation Use Accessory comparison
- **bb.** Invalid Tax Districts
- **cc.** Sketch Edits
- **dd.** Commercial Improvement Data Validation
- **ee.** Preferential Digest Class/Improvement/Covenant

A. Owners w/o Property – These are owners that have no real, personal or prebilled mfg housing accounts assigned to them. There is no harm in leaving these records in WinGAP except for the confusion that may result from having owner information that does not relate to any property type. Owners without property can be removed from the system by:

1. Performing an Owner Search and locating the owner on the report
2. Confirm that the selected owner has no property assigned (check the Assessment Info and Value section of the screen for numbers and values greater than zero)
3. If the non-existence of property is confirmed, click the Delete button
4. Key the password which is **delete**
5. Repeat steps 1 – 4 until all owners are removed

B. Parcel w/o property items – Parcels included in this section of the report have no property components such as land, residential improvements, commercial improvements, accessories, etc. assigned to them. These parcels should be reviewed and deleted if they were entered in error. The user should also check to see if the owner of a parcel without property has any more property assigned to him/her. If no other property has been assigned, the owner may also be deleted in the manner described above for "owners w/o property."

C. Residential improvements with mfg housing occupancy and no mobile home record – On rare occasions the user may receive the following error message when accessing residential improvements:



The message states that: **You have an occupancy of 4, which indicates a manufactured home – however, the mobile.dbf does not contain a record the manufactured home. If you have not deleted the manufactured home and fee something may be in error in your data, please contact Tech Support and report the problem so that it may be resolved.**

Residential improvements that appear on in this section of the Data Edits report will produce the above error message. If the mfg home was deleted and the residential improvement was not removed but should have been, the user can correct the problem in the following manner.

1. Using the improvement key, proceed to the improvement (the improvement in question may not be the first residential improvement that appears.)
2. Change the occupancy to an occupancy other than Mobile Homes and delete the improvement or add the missing mfg housing information.
3. If the improvement cannot be accessed, contact Tech Support

D. Commercial improvements with extra feature value but no extra features – These commercial improvements would be improvements that have an extra feature value in the commercial improvement record and consequently included in the commercial building value but there are no extra features present. The user should confirm that the extra features should have been removed and when the commercial improvement is edited the extra feature value will be set to zero. If the extra features should be present, they will need to be added to the improvement.

E. Personal property accounts without property items - Accounts included in this section of the report have no property components such as inventory, machinery & equipment, boats, etc. assigned to them. These accounts should be reviewed and deleted if they were entered in error. The user should also check to see if the owner of an account without property has any more property assigned to him/her. If no other property has been assigned, the owner may also be deleted in the manner described above for "owners w/o property."

F. Parcels/Accounts where the sum of the items does not equal current value – On occasions, due to errors/aborts or work in FoxPro, a parcel or personal property account's current value may not equal the sum of the property components. Such situations are listed within this section of the Data Edits report. The Data Edits routine corrects the current value by setting it to the sum of the property components but the parcels/accounts are brought to the attention of the user. **All edits are critical but this edit is especially critical before the printing of Change of Assessment Notices**. The current value is printed on the notice and it is imperative that it is correct.

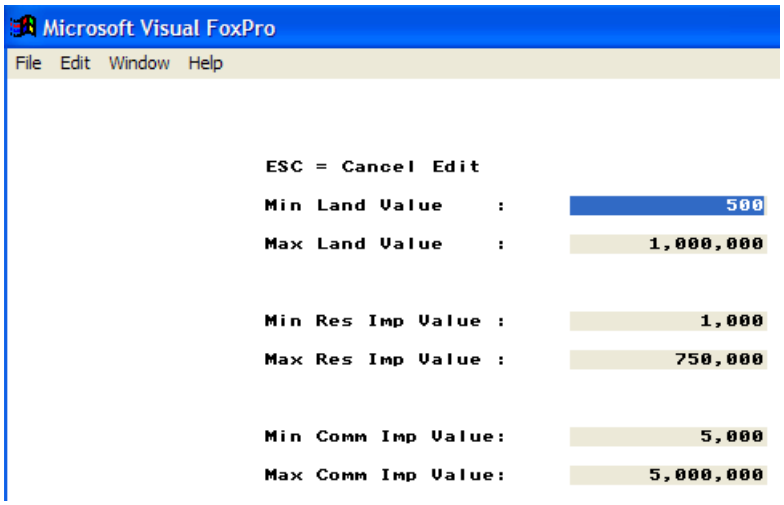
G. Orphaned records – Orphaned records are parcels that do not have an owner, residential improvements that do not have a parcel assigned to them, boats that do not have an account, etc. Orphaned records may occur as a result of errant data management routines, by issues within WinGAP or hardware malfunction.

Orphaned records should be a rarity. However, if any orphaned records should exist Data Edits will report them and also remove them from the system.

H. Property with zero value – The routine identifies all property (real, personal, mfg housing) that has a zero value. A property is determined to have a zero value when both the calculated value and the override value are zero. In some cases, this could be legitimate. However, in most situations the zero value is a result of a data entry error. Some examples of data entry error are a grade of 0, obsolescence and depreciation factors of 0, etc. On some occasions, zero values could be the result of problems in schedules where the appraiser has entered a unit value or factor that results in a zero calculated value.

I. Properties that exceed user specified max and min values – This section of the Data Edits routine allows the user to specify a maximum legitimate value and a minimum legitimate value for each property type. The routine will then check for property that exceeds that maximum value and property that is greater than zero but is less than the minimum value. The goal is to identify properties that have extremely high values or extremely low values. These properties can then be reviewed for accuracy.

The max and min values are entered on screens as shown below:



The max and min values are saved in a table and presented to the user the next time the routine is run. If desired, the user may skip the max-min edit routine by press ESC.

J. Homesteaded parcels without improvements – The parcels reported during this portion of Data Edits are those that have a homestead code other than S0 or blank but do not have a residential improvement. In some situations, a homestead maybe assigned to a parcel with a commercial improvement or perhaps even an accessory improvement but these are exceptions and will be reported as potential errors by the edit.

K. Properties with missing digest codes – Parcels and property items with missing or invalid digest codes are reported by this edit routine. The digest classification and digest stratification are checked independently and if either digest code is blank or invalid, the property will be listed. The routine does not check for an invalid mix of codes such as a digest class of Commercial (C) assigned to an improvement with Conservation Use (V) classed land or a Residential improvement (R) placed on Agricultural classed (A) land.

L. Conservation Use Covenant Issues – Parcels with Conservation Use covenants or parcels with data indicating a Conservation Use covenant are reviewed and the following issues are reported when found:

1) Conservation Use covenant has expired
2) No current year Conservation Use value is present for the covenant
3) The 3% annual limit for covenant value change has been exceeded
4) The 34.39% term limit for covenant value change has been exceeded
5) The existence of a covenant year but no other conservation use data
6) Orphaned Conservation Use records
7) Existence of Conservation Use history but no assignment of a Conservation Use Year
8) Existence of a Conservation Use Year but an incorrect digest class (digest class must be a V, W or T)
9) Conservation Use value exceeds the Fair Market Value of parcels
10) Sum of Conservation Use land value and Conservation Use accessory value does not equal the Unadjusted Conservation Use value
11) A comparison with previous year conservation use data is performed if the user wishes to do so and the following issues are checked and listed:
    a. Ownership changes
    b. Acreage modifications

M. Preferential Covenant Issues - Parcels under a Preferential Covenant are reviewed and the following issues are reported when found:

1) An expired Preferential Covenant
2) Existence of a Preferential Covenant but no Preferential land value
3) Absence of a Preferential Year when a Preferential land value is present
4) Sum of the value of accessories with a "P" digest class exceeds $100,000
5) Existence of a Preferential accessory but no Preferential land value

N. Freeport Edits – Personal Property accounts with Freeport Exemption data are checked for the following:

1) A Gross Freeport Value that exceeds 0 and a Net Freeport Value that is equal to 0
2) A Freeport Return Year and is not equal to the Digest Return Year
3) Existence of a Freeport Value on the account and a Net Freeport Value equal to 0

O. Mfg Housing Edits – The following checks are performed during the Data Edits routine on Manufactured Housing data;

1) Invalid class assignment to a mfg housing record (EX, VG, GD, AV, FR and LC are the valid classes)
2) Class assignment to a mfg home does not match the class assignment in the Mfg/Model table

P. Change of Assessment Reason Edits – Real property and personal property accounts are checked for the existence of a notice flag and no COA reason or the existence of a COA reason (excluding the reason code NN – No Notice) and no notice flag.

Q. Parcels and Personal Property Accounts that have a value difference but no COA Reason/Not Flagged for Notice – Real property and personal property accounts that have a value difference but no COA reason or the existence of a COA reason (excluding the reason code NN – No Notice) and no notice flag are checked.

R. Mfg Housing Class Assignments – The Class assignment made to a mobile home record is compared to the assignment in the Mfg Housing table and reported when the two are not the same.

S. Life Expectancy Assignments – Life Expectancy assignments made to Mobile Home records are compared to Life Expectancy for the Mfg/Model entry in the Mfg Housing table and reported when the two are not the same.

T. Land Type/Class Validation – Land Types and Classes are validated against the Rural Land schedule and reported when they are not found in the table.

U. Zero Value Prebilled Mfg Housing – Prebilled Manufactured Housing that have no box value will be listed.

V. Frozen and Removed Homesteads – Parcels will be checked for the removal of a homestead with no name change, and removal regardless of a name change.
W. No PT50 Accounts – Accounts flagged for no printing of a PT50 with an owner account value greater than 7500 will be listed for confirmation of the flag.

X. Various Other Homestead Edits – Homestead edits have been added that check for various scenarios related to State 65 and Over Homestead Exemptions.

1) The tax district/homestead exemption code combination not being found in the Homestead table. This will be regarded as an Invalid Tax Dist + Homestead Code.
2) State Homestead value on a parcel that does not have a State 65 & Over Homestead code
3) State Homestead flag on a Residential Improvement, Commercial Improvement or Accessory when the parcel has a non-State Homestead code
4) A State Homestead value of zero on a parcel with a State Homestead code
5) A State Homestead code but no improvements flagged for State Homestead
6) A parcel where the State Homestead value does not equal the sum of the parcel components (land and improvements) eligible for State Homestead

Y. Preferential Covenant Change In Ownership – Checks for any changes in ownership of Preferential Covenants

Z. Conservation Use Acre / Market Acre Comparison – Compares the Conservation Use acres to the Market acres on a parcel and when the two are not equal the parcel will be place on the Data Edits report

AA. Conservation Use Accessory Comparison – If an Accessory Improvement classified as Conservation Use is found on a non - Conservation Use parcel, the Accessory Improvement will be listed on the Data Edits report.

BB. Invalid Tax Districts – Checks for invalid Tax Districts in Real and Personal Property and Prebilled Manufactured Housing.

CC. Sketch Edits – Labels assigned to sketch records will be checked for validity with regard to schedules. Also, mismatches between the label assigned to a sketch and the label stored in the wgsketch.implabel field will be reported.

DD. Commercial Improvement Data Validation – Commercial Improvements will be checked for invalid or missing Used As / Built As Codes, Wall Height, Construction Type, Life Expectancy, and Year Built / Effective Year Built data.

EE. Preferential Digest Class/Improvement/Covenant – Improvements with a Preferential Digest Class will be checked to make sure they are located on Parcels that have a Preferential Covenant.

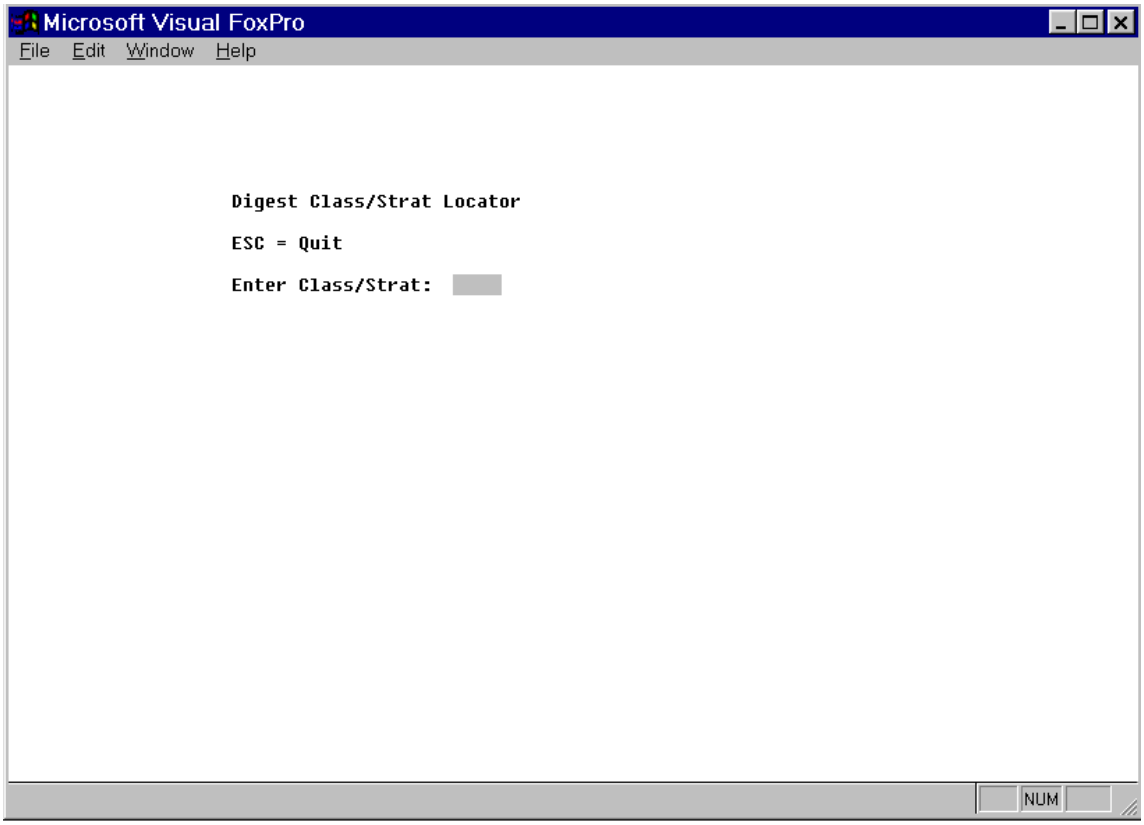
Selected Data Edits

If the user keys an "S" on the screen that appears when the **Tools >> File Maintenance >> Data Edits** choice is made, a second screen will appear, below, where **Selected Data Edits** can be run by keying a "Y" or "N" for each of the options.

At the conclusion of the Selected Data Edits routine, the user will be presented a preview of the Data Edits report, next page, for the edits that were selected. The user can elect to print all of the report, select a range of pages to print or print none of the report.

Cls/Str Locator

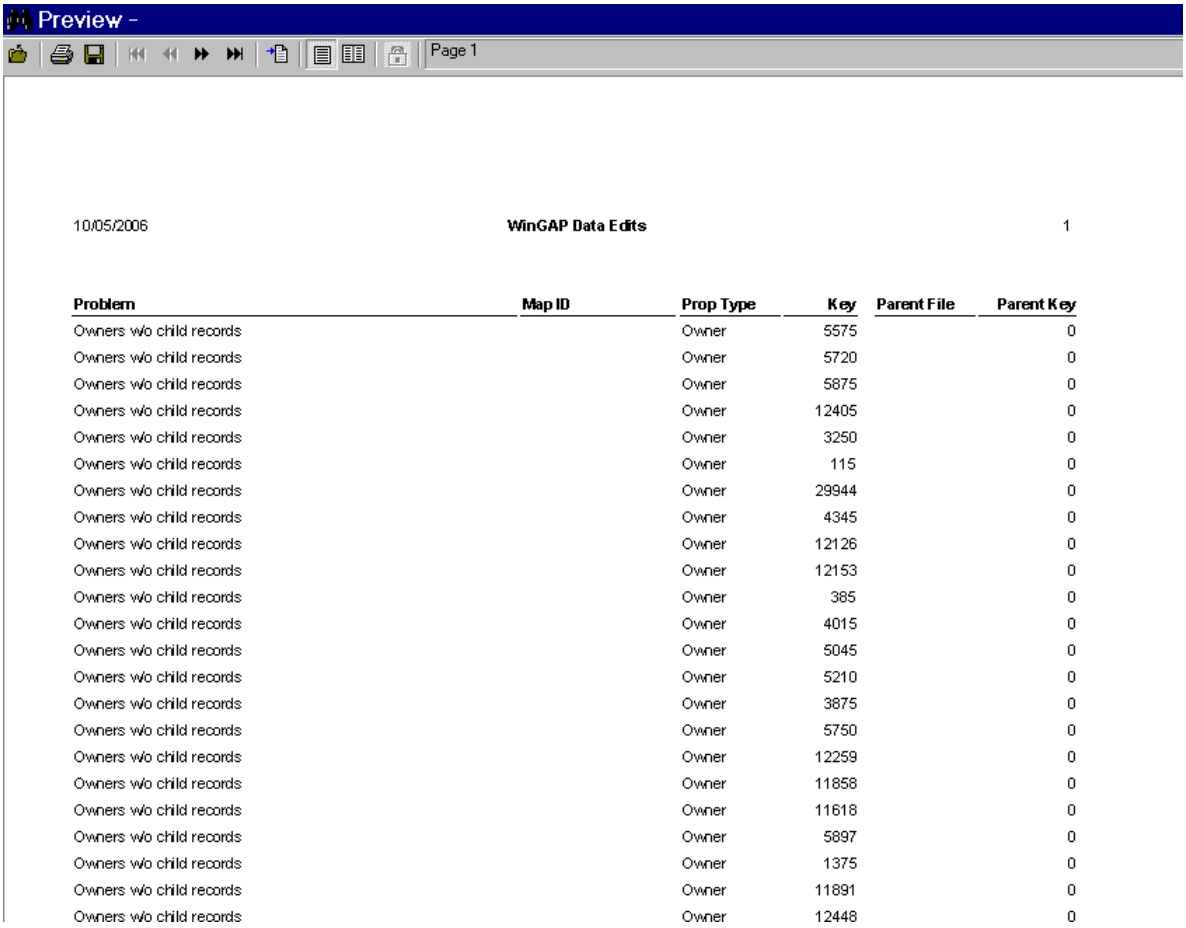
If the user keys an "C" on the screen that appears when the **Tools >> File Maintenance >> Data Edits** choice is made, a second screen will appear, next page, where a Class/Strat code can be keyed and a report generated for all properties where the code has been assigned.



The desired Class/Strat, such as R1, should be keyed, followed by Enter. The Data Edit procedures for that Class/Strat will run, and when they are finished, the user will be prompted to enter another Class/Strat, which can be done, or the Enter key can be pressed to produce the Data Edits Report.

Data Edits Report

At the completion of the edit routines, the user is presented a preview of the Data Edits report. The report can be printed in its entirety, by selected pages or previewed only. An example of the report can be seen on the next page.


Preview -

Page 1

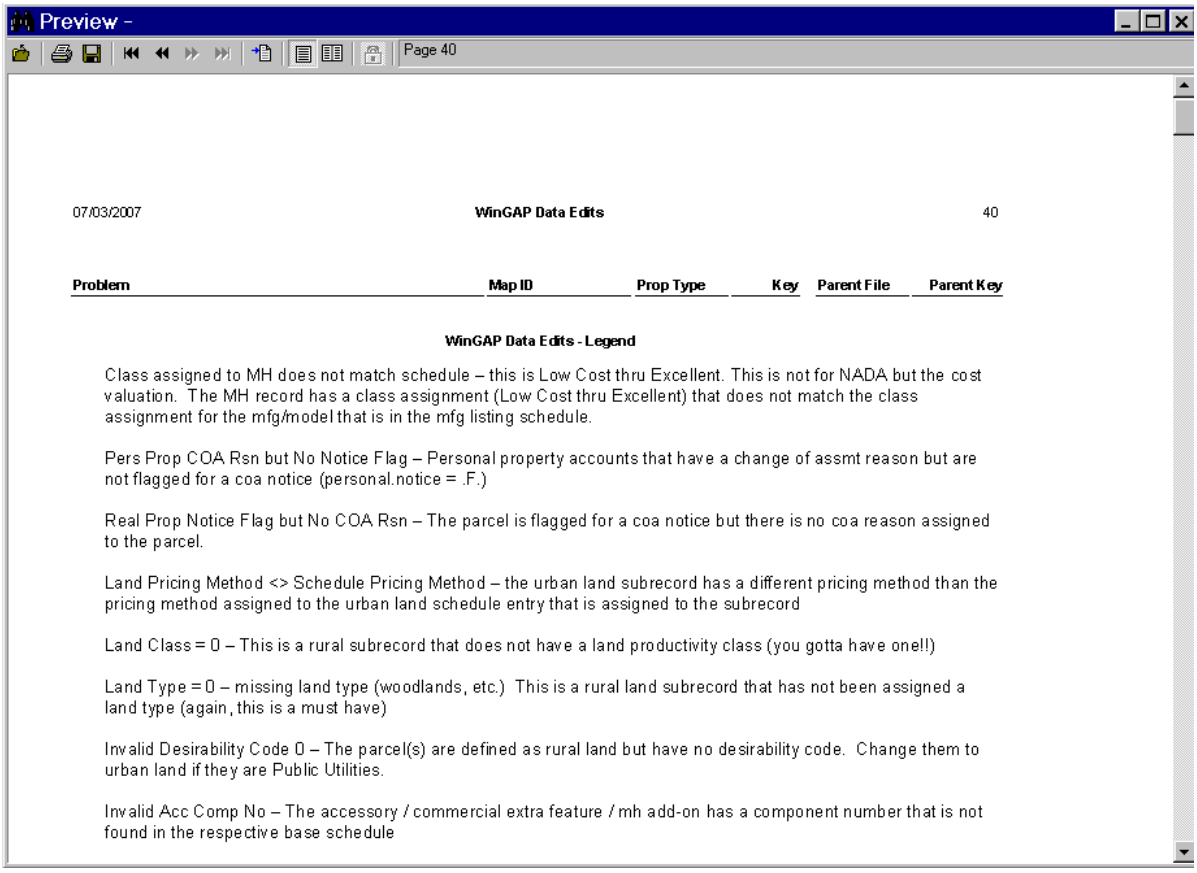
10/05/2006 WinGAP Data Edits 1

Problem	Map ID	Prop Type	Key	Parent File	Parent Key
Owners w/o child records		Owner	5575		0
Owners w/o child records		Owner	5720		0
Owners w/o child records		Owner	5875		0
Owners w/o child records		Owner	12405		0
Owners w/o child records		Owner	3250		0
Owners w/o child records		Owner	115		0
Owners w/o child records		Owner	29944		0
Owners w/o child records		Owner	4345		0
Owners w/o child records		Owner	12126		0
Owners w/o child records		Owner	12153		0
Owners w/o child records		Owner	385		0
Owners w/o child records		Owner	4015		0
Owners w/o child records		Owner	5045		0
Owners w/o child records		Owner	5210		0
Owners w/o child records		Owner	3875		0
Owners w/o child records		Owner	5750		0
Owners w/o child records		Owner	12259		0
Owners w/o child records		Owner	11858		0
Owners w/o child records		Owner	11618		0
Owners w/o child records		Owner	5897		0
Owners w/o child records		Owner	1375		0
Owners w/o child records		Owner	11891		0
Owners w/o child records		Owner	12448		0

Following is an explanation of each column in the report:

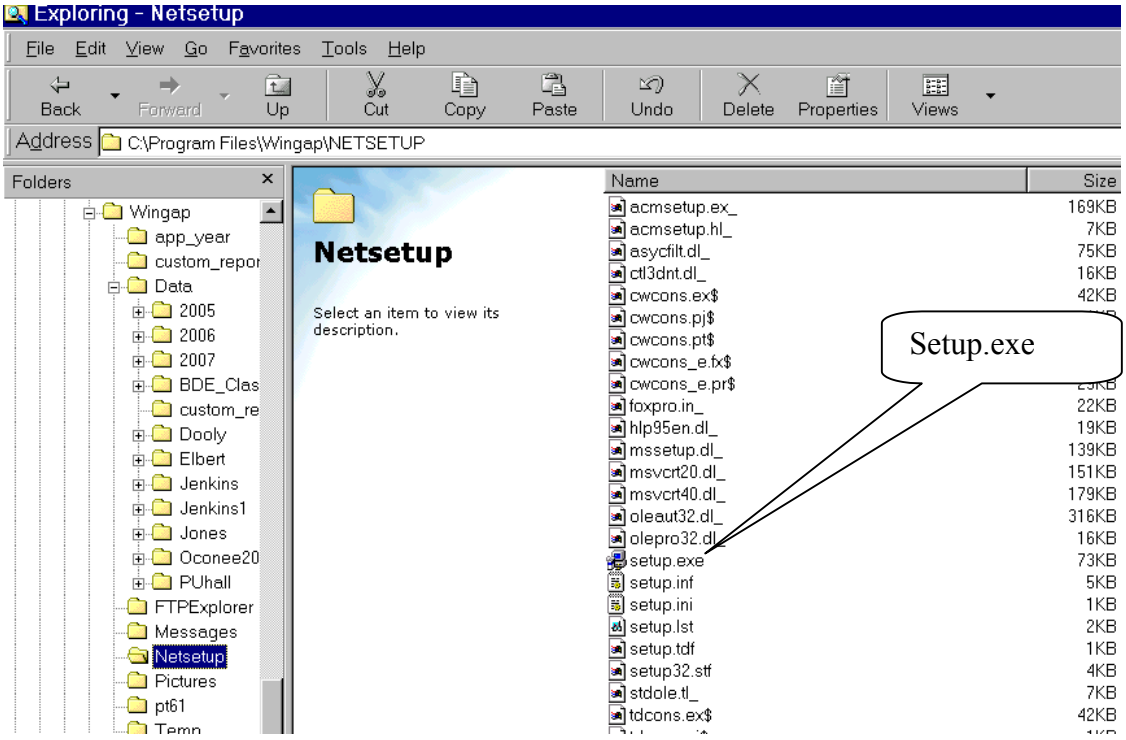
- Problem – a definition of the edit that produced an entry on the report
- MapID – the map and parcel identifier
- Prop Type – the property type that has been identified as having a problem
- Key – the unique key number that is associated with the record having the problem
- Parent File – Some property items can only be accessed through another property type known as its parent which is identified in this column. For example, a residential improvement cannot be accessed directly. The user must first locate the parcel, open the residential improvement with the Edit button and identify the improvement in question with the key identifier from the Key column. In this case, the parent file would be Real and the property type would be Res Imp.
- Parent Key -- the account number for the parent property type

The last page of the Data Edits Report, next page, contains some instructions on how to fix some of the problems identified in the Edits Report.

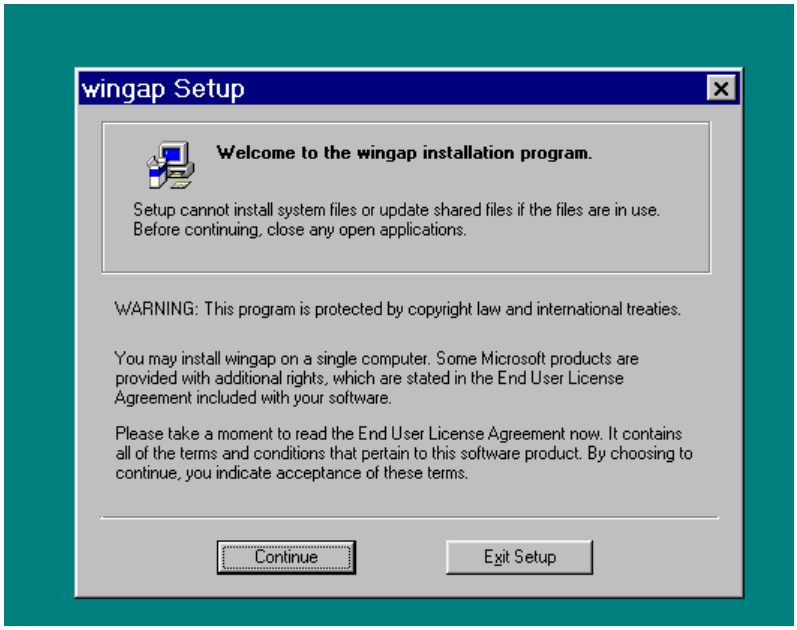


Running NetSetup

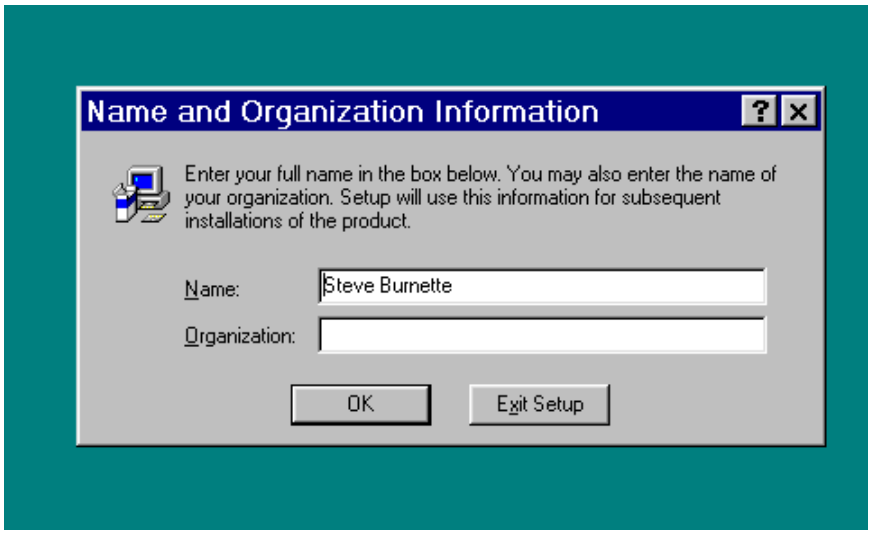
To run NetSetup, the user should run Windows Explorer and navigate to the Netsetup folder within the Program Files >> WinGAP folder, as shown on the next page. If the NetSetup folder is not present, the folder and its contents can be downloaded from ftp://ftp.wingap.com/misc.



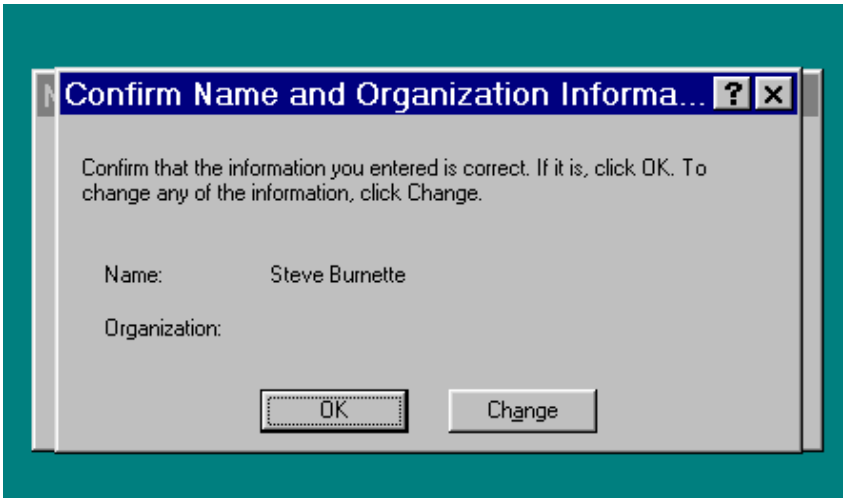
The user should double-click on the setup.exe file within this folder, as shown above. This will produce the WinGAP Setup Form, as shown below.



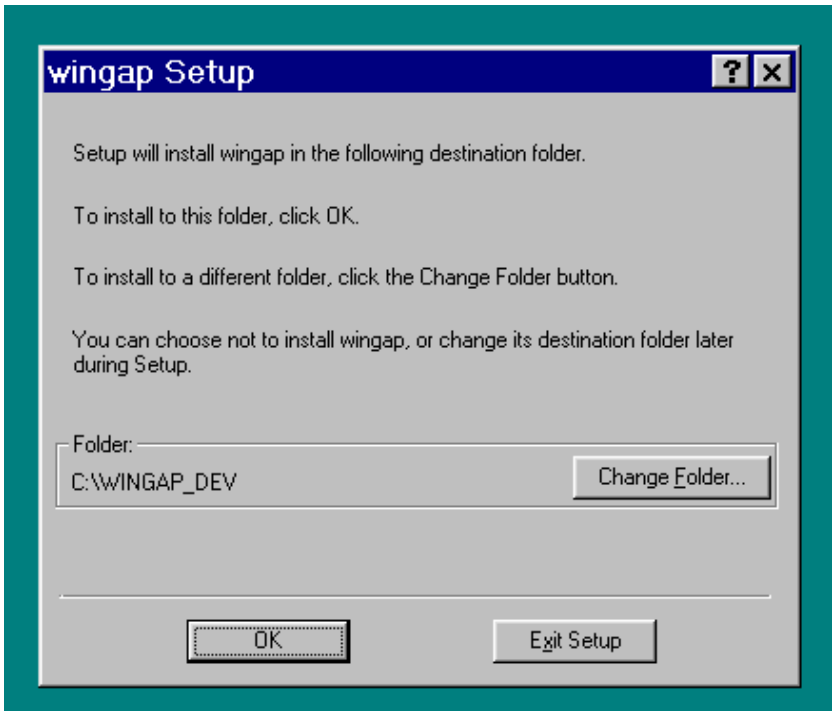
The Continue Button should be clicked to proceed to the Name and Organization Form, next page.



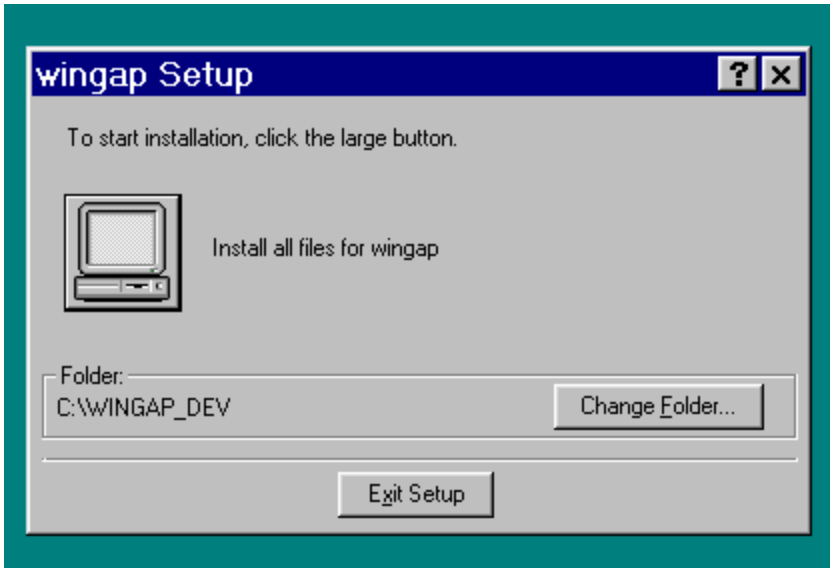
After keying the appropriate user name and organization name into the fields on the Form, and clicking the OK Button, the user will receive a Confirmation Form, below, where the information can be checked and the OK Button clicked to proceed.



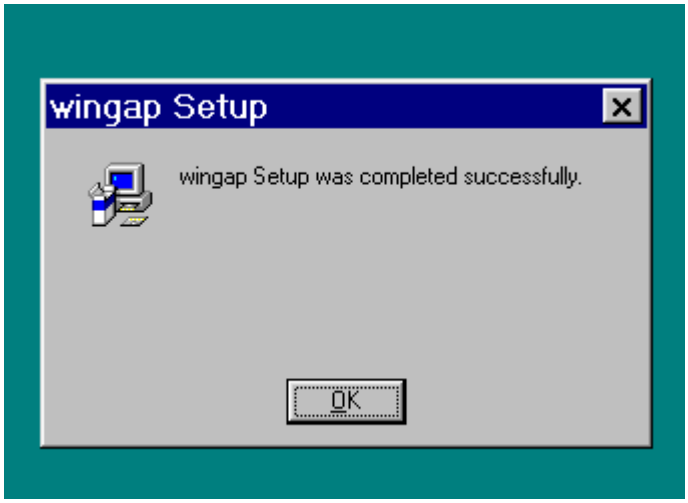
WinGAP will then search for installed components, and once they are found, produce the message shown on the next page.



The default folder can be changed, if necessary, by clicking the Change Folder Button. The OK Button should be clicked to proceed to the Install all files for WinGAP Form, below, where the large Button on the left of the Form should be clicked to continue with the installation.

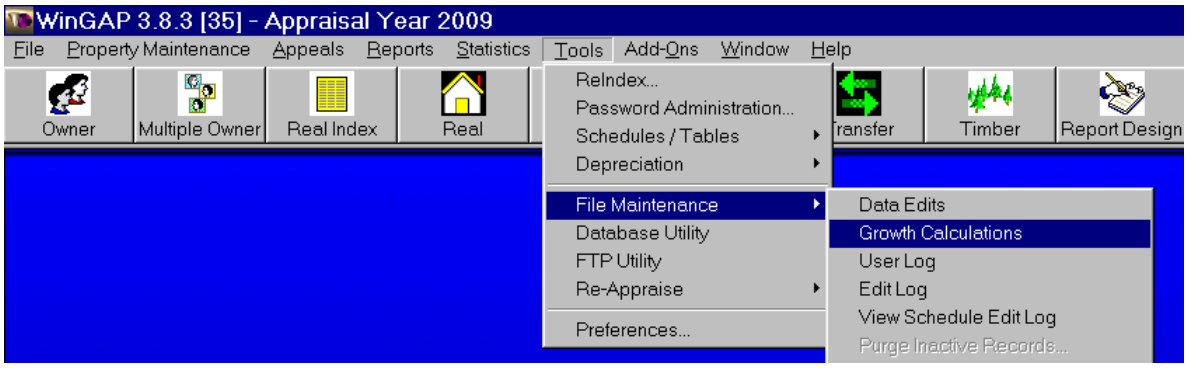


The user may receive various messages as the installation continues. At the conclusion, the following message should be received:

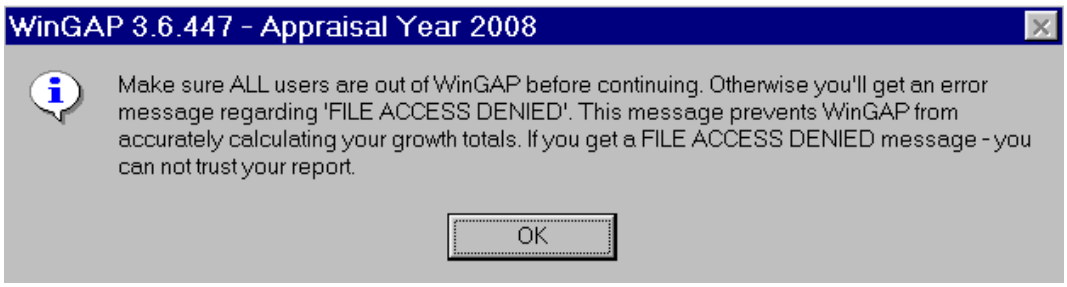


The OK Button can be clicked to conclude NetSetup.

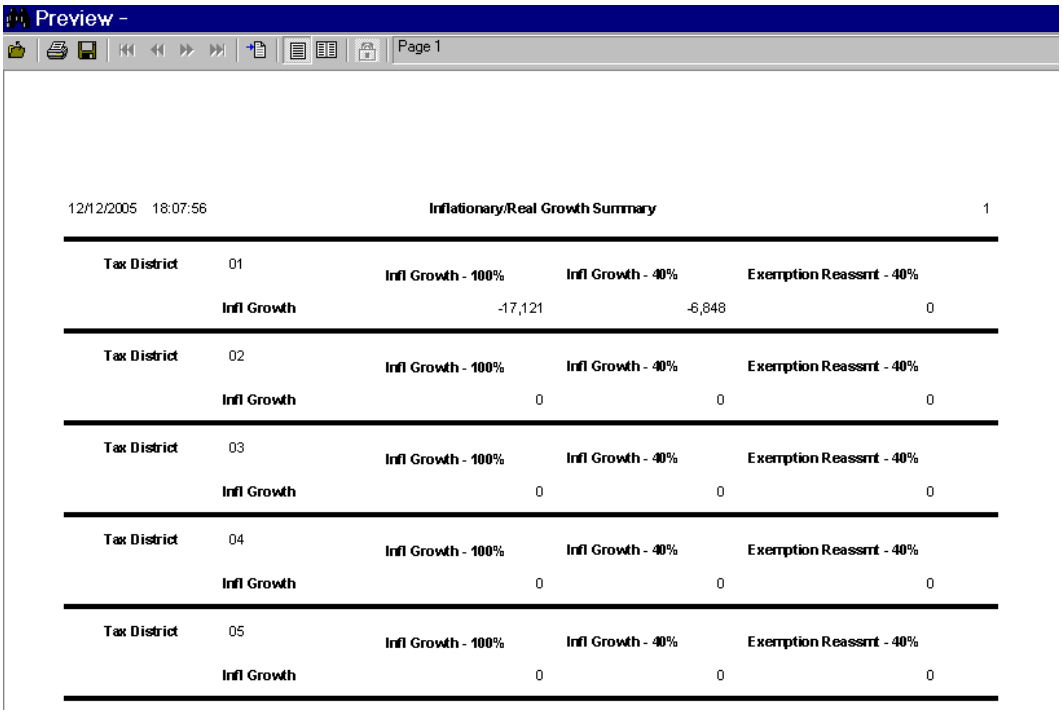
Growth Calculations



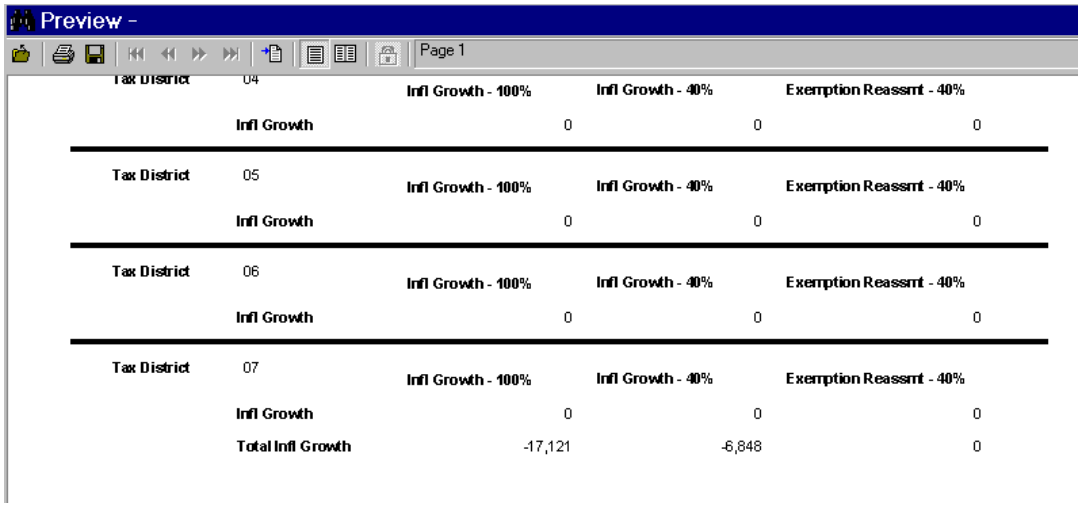
The second option on the **Tools >> File Maintenance** menu runs the **Growth Calculations** routine, which determines the amount of Inflationary Growth per parcel. This routine MUST be run before advertising millage rates and digest submission. Clicking on this option produces two messages, below and on the next page, that stress the importance of having all other users out of WinGAP:



All users must be out of WinGAP for the data on the Growth Calculations report to be accurate. Clicking OK on the two messages or pressing Enter will produce a print preview of the Inflationary/Real Growth Summary, as shown below, for each Tax District in the County.



The end of the report will display a county-wide summary of inflationary growth numbers:



Processing COA Types and Growth Values

As mentioned earlier, before advertising millage rates and digest submission, the amount of inflationary growth for each parcel must be determined, and is accomplished by running the Growth Calculations report.

This procedure **MUST** be run prior to providing growth figures for millage rate determination and/or digest submission.

The assignment of COA reasons and their associated COA Types during the data entry of information related to parcels and reappraising when schedules were updated comprised the first step in the process of determining growth amounts.

The second and final step involves running the growth procedure to segregate real growth and inflationary growth. The procedure will check the COA reasons assigned to each parcel for their COA Type and process the change in value accordingly.

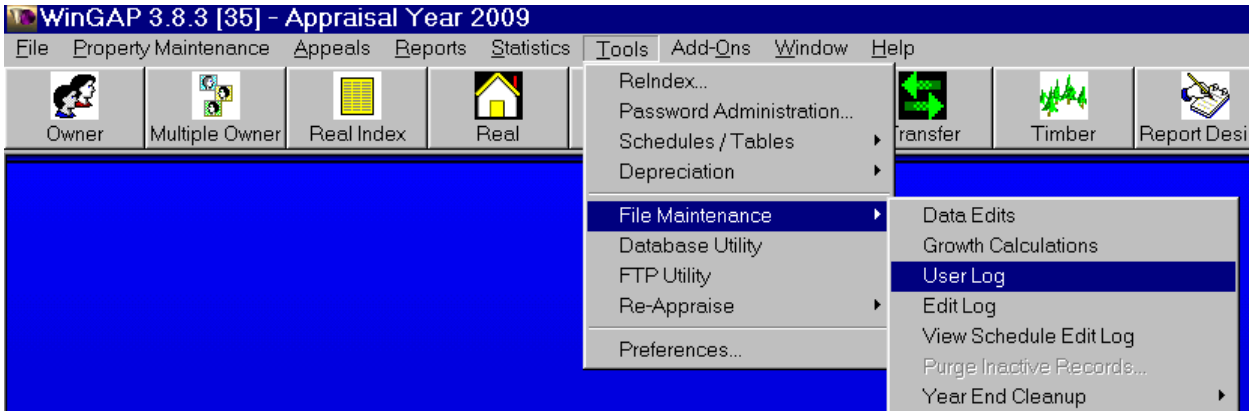
A COA Type of Inflationary will result in the difference between current value and previous value being calculated as inflationary growth. New construction will be deducted from the inflationary growth.

Real growth COA Types will result in no contribution to inflationary growth. The value difference between current and previous value will be considered as real growth. If an inflationary reason is also assigned to the parcel, a portion of the value difference may contribute to inflationary growth.

In situations where a COA reason with a Split/Combination COA Type exists on a parcel, no inflationary growth will be calculated. In addition, parcels with a zero previous value will not be assigned any inflationary growth regardless of the COA Type.

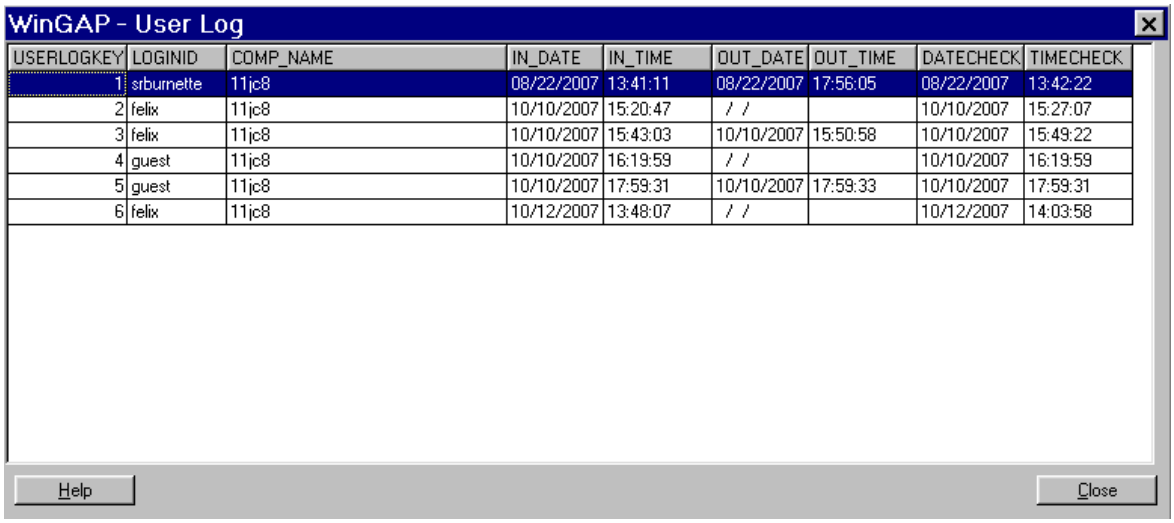
The inflationary growth per tax district will be printed as stated earlier at when the Growth option is run within WinGAP. The inflationary growth numbers will also be printed with the other Digest Submission reports.

User Log



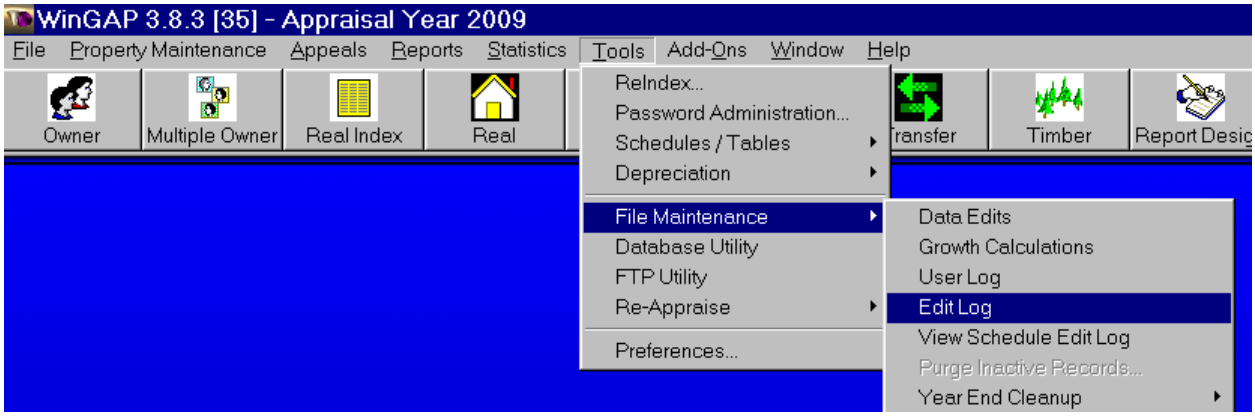
The **User Log** option on the **Tools >> File Maintenance Menu**, above, keeps a record of all WinGAP users that logged into WinGAP.

Each record on the User Log Form, shown on the next page, lists the User Log Key, the Login ID, the Computer Name, the Login Date, the Login Time, The Logout Date, the Logout Time, the Date Check, and the Time Check.



When Year End Cleanup is run, the User Log in the new Appraisal Year is cleaned out. The entire User Log will remain in the previous Appraisal Year.

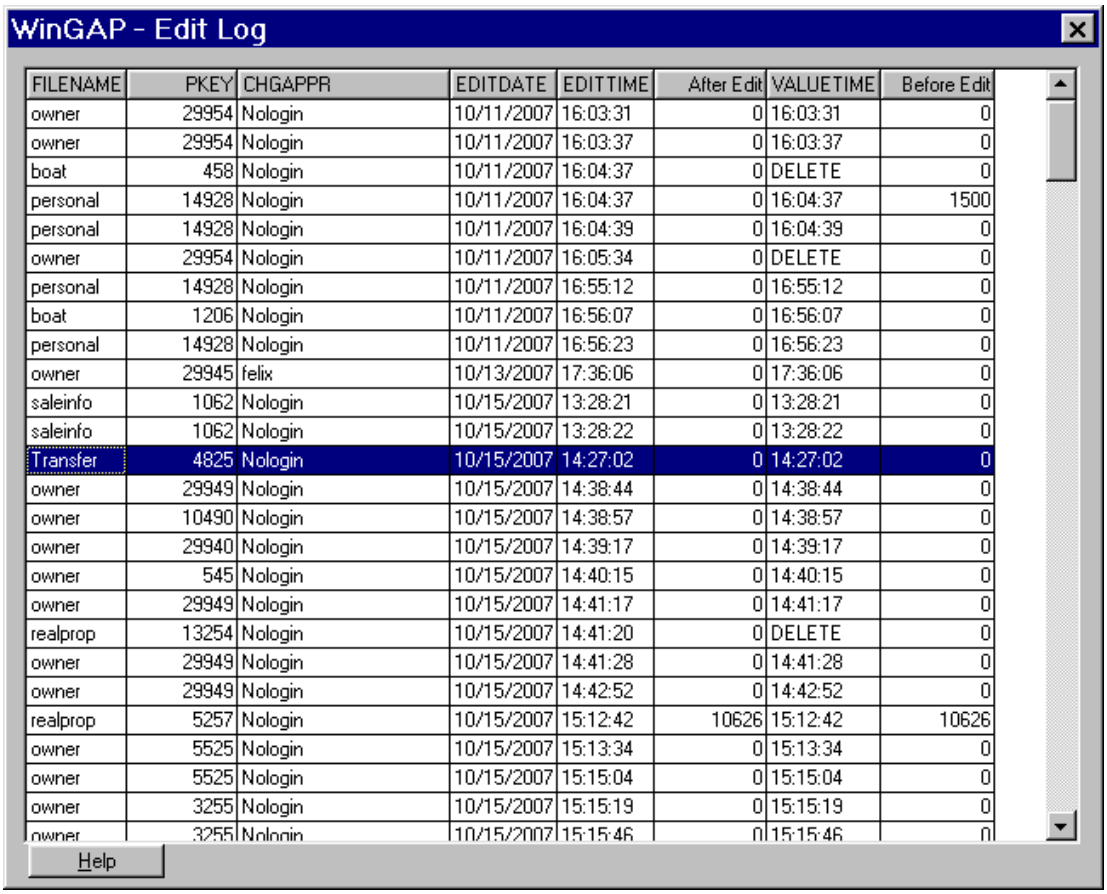
Edit Log



The **Edit Log** option on the **Tools >> File Maintenance Menu**, above, keeps a record of virtually every user-initiated operation that changes a record in WinGAP. Any time a user accesses WinGAP and adds a record, or makes a change to an existing record, it is recorded in the Edit Log database. For example, a user adds a Boat to a Personal Property Account. The Edit Log would reflect that on a certain date, the Personal and Boat database files were modified by that user. If a parcel, personal property account, or prebilled mobile home is transferred from one owner to another, the term "Transfer" will appear in the filename column in the Edit Log.

Each record on the Edit Log Form, next page, lists the File Name, PKey, ChgAppr ID (if no logins are used, it will say "Nologin"), Edit Date, Edit Time, After Edit (value after edit), Value Time (the time the value was changed), Before Edit (value before edit), and the Owner key for the record that was edited. Items in the Edit Log are listed in Date and Time order. The Edit Log database can be accessed from the Report Generator and activity reports printed if needed.

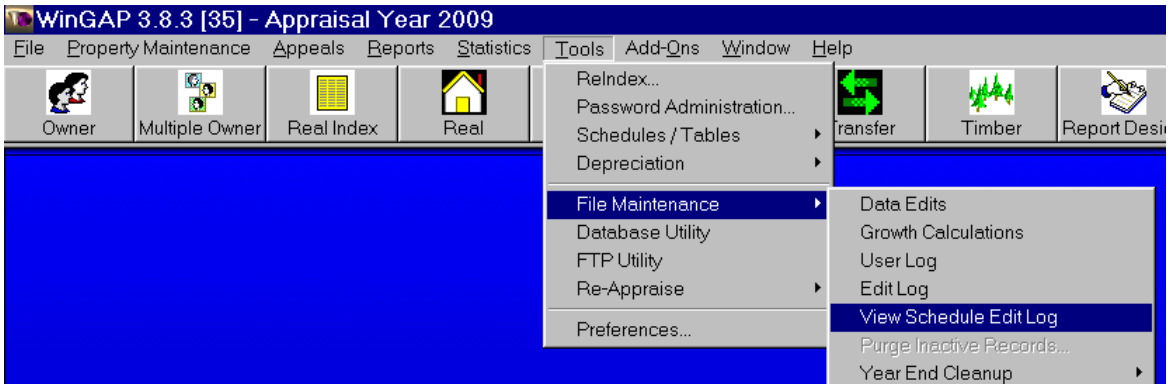
The Edit Log for each type of property in WinGAP can also be viewed by clicking the Edit History Button on the following Forms: Owner, Realprop, Residential Improvements, Accessories, Commercial Improvements, Commercial Extra Features, Personal, Machinery/Equipment/ Furnishings/Fixtures, Taxable Inventory, Freeport Inventory, Boats, Aircraft, Other, Mobile Homes, and Add-Ons. In these cases the Edit Log will display entries as to when that particular parcel, improvement, account, etc. was added to or changed.



FILENAME	PKEY	CHGAPPR	EDITDATE	EDITTIME	After Edit	VALUETIME	Before Edit
owner	29954	Nologin	10/11/2007	16:03:31	0	16:03:31	0
owner	29954	Nologin	10/11/2007	16:03:37	0	16:03:37	0
boat	458	Nologin	10/11/2007	16:04:37	0	DELETE	0
personal	14928	Nologin	10/11/2007	16:04:37	0	16:04:37	1500
personal	14928	Nologin	10/11/2007	16:04:39	0	16:04:39	0
owner	29954	Nologin	10/11/2007	16:05:34	0	DELETE	0
personal	14928	Nologin	10/11/2007	16:55:12	0	16:55:12	0
boat	1206	Nologin	10/11/2007	16:56:07	0	16:56:07	0
personal	14928	Nologin	10/11/2007	16:56:23	0	16:56:23	0
owner	29945	felix	10/13/2007	17:36:06	0	17:36:06	0
saleinfo	1062	Nologin	10/15/2007	13:28:21	0	13:28:21	0
saleinfo	1062	Nologin	10/15/2007	13:28:22	0	13:28:22	0
Transfer	4825	Nologin	10/15/2007	14:27:02	0	14:27:02	0
owner	29949	Nologin	10/15/2007	14:38:44	0	14:38:44	0
owner	10490	Nologin	10/15/2007	14:38:57	0	14:38:57	0
owner	29940	Nologin	10/15/2007	14:39:17	0	14:39:17	0
owner	545	Nologin	10/15/2007	14:40:15	0	14:40:15	0
owner	29949	Nologin	10/15/2007	14:41:17	0	14:41:17	0
realprop	13254	Nologin	10/15/2007	14:41:20	0	DELETE	0
owner	29949	Nologin	10/15/2007	14:41:28	0	14:41:28	0
owner	29949	Nologin	10/15/2007	14:42:52	0	14:42:52	0
realprop	5257	Nologin	10/15/2007	15:12:42	10626	15:12:42	10626
owner	5525	Nologin	10/15/2007	15:13:34	0	15:13:34	0
owner	5525	Nologin	10/15/2007	15:15:04	0	15:15:04	0
owner	3255	Nologin	10/15/2007	15:15:19	0	15:15:19	0
owner	3255	Nologin	10/15/2007	15:15:46	0	15:15:46	0

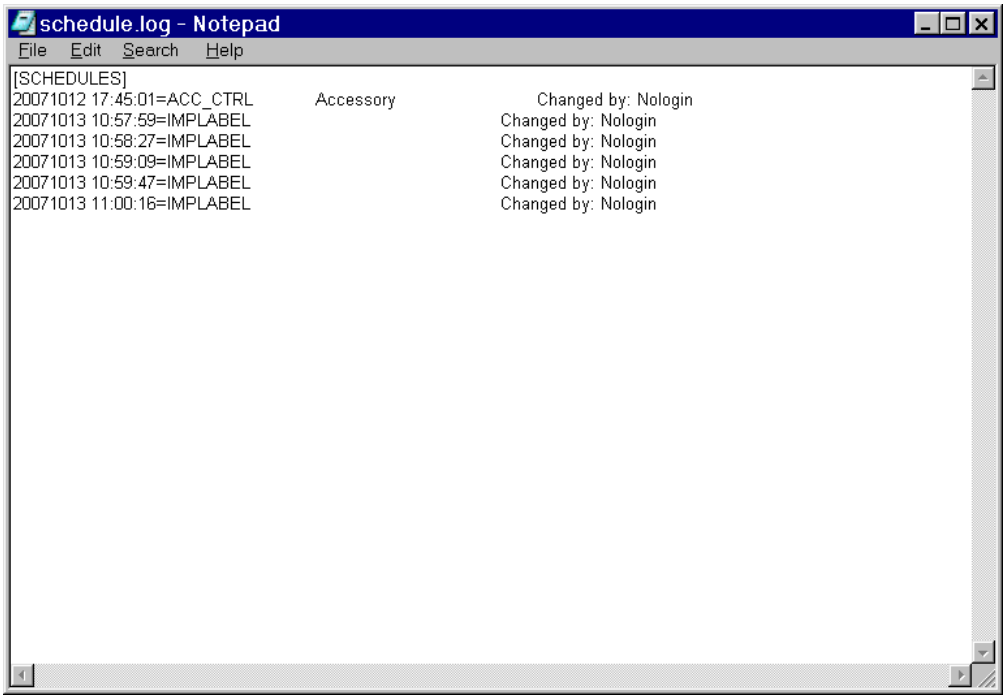
When Year End Cleanup is run, the Edit Log in the new Appraisal Year is cleaned out. The entire Edit Log will remain in the previous Appraisal Year.

View Schedule Edit Log

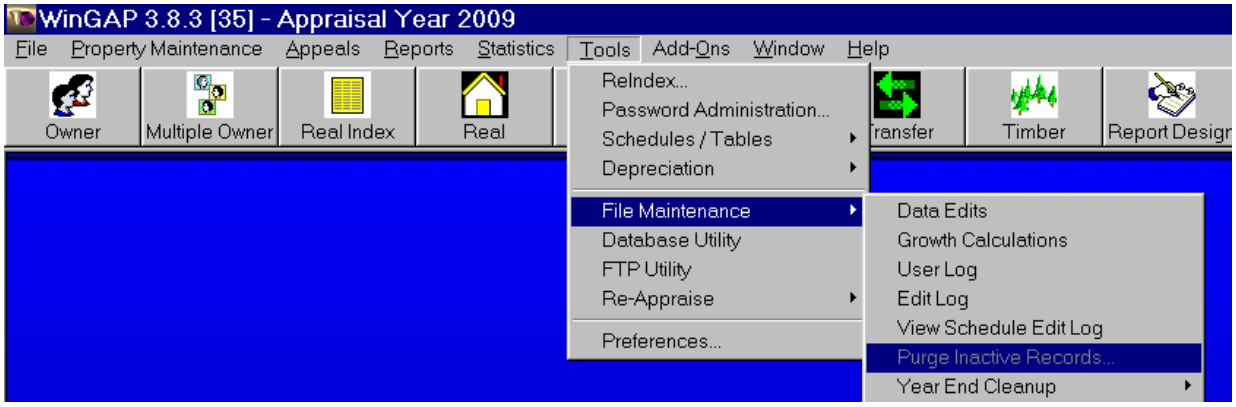


The **Schedule Edit Log**, the fourth item on the **Tools >> File Maintenance** menu, keeps a record of all changes made to WinGAP schedules. Any time a user accesses a WinGAP schedule and adds a record, or makes a change to an existing record, it is recorded in the Schedule Edit Log database, as shown below. For example, a user adds a new Heating Type to the Heat Schedule. The Schedule Edit Log would reflect that on a certain date and time, a new item was added to the Heat Schedule. If an existing Schedule item was modified, the Schedule Edit Log would have an entry for that modification.

The Schedule Edit Log record associated with the addition or change lists the Date, the Time, the File Name that was changed, and the User Login ID (if no logins are used, it will say "Nologin"). The Schedule Edit Log can be printed from the Windows Notepad or a word processor such as Microsoft Word if needed.



Purge Inactive Records



This item is not functional in WinGAP Version 3.8.3.